The Date of Kurukshetra War

A. N. CHANDRA

RATNA PRAKASHAN
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By

Sri Kshitish Chandra De

For

RATNA PRAKASHAN
14/1, Peary Mohon Roy Road,
Calcutta-700 027

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Dedicated to My Parents

Late Dr. Kedar Nath Chandra
&
Late Usha Rani Chandra
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PREFACE

This dissertation aims at finding out the period of the Kurukṣhetra war. Since no Archaeological, Numisatic or Epigraphic evidences of the war period have been unearthed or found till now, only the records of the Greek classical historians, traditional references as obtaining in the various literatures and the astronomical references found in the Mahābhārata have been made use of. So long, some of the western Indologists were inclined to think that the ‘war’ was a ‘myth’ without any historical background whatsoever; others found similarity of western or Babylonian folk tales in the story as found in the Mahābhārata. Many Indian historians also had nursed the same idea. But now, after the excavation carried out at several sites, the excavators-in-charge have found townships bearing resemblances to the Mahābhārata townships of Hastināpur and Kauśambi. The excavator at the Hastināpur site is, however, inclined to put a date of about 800 B.C. to his ‘finds’. These excavations have led the serious and unbiased historians of all countries to review the matter in the light of recent discovery. Now-a-days many historians are of opinion that the Kurukṣhetra war had a historical background (Annexures D to G). The present treatise tries to find out the period when the war actually took place.

So long, those western Indologists, who believed in the historicity of the war, merely thought that it was a locally oriented clannish affair, and they termed it Kuru-Pāṇḍava war. But from a study of the Mahābhārata and the Purāṇas, it is evident that almost the whole of India and some border tribes also were involved in this warfare. It would, therefore, be naive to treat the battle as a mere clannish affair. The finding of the cities due to excavation as well as its connecting link with the Purāṇic and the Mahābhārata township has broadened the dim horizon of the scholars to some extent. They have started to take active interest in the matter in all seriousness. In this country, at the Vidūra Sevā Āśram at Bijnor, a seminar
was held in this connection at which many scholars took part. At Calcutta, a table talk was arranged by the Indo-German Association at the Max Mueller Bhavan on 11. 12.1975 and the matter was discussed from all angles by the present author. A paper in connection with the dating of the Bhārata War was read at the XXXVI session of the Indian History Congress at Aligarh in December, 1975 also by the author. The task undertaken in the present treatise is to present the various references obtaining in the texts and literatures regarding Kurukṣetra war and to analyse them through literary and astronomical methods.

As to the subject contents of this work, Chapter I covers the background of the war. It has been aimed at preparing the readers to understand the socio-economic, political, personal and religious factors involved, which ultimately culminated in such an extensive warfare. It has been unravelled that the character of Krīṣṇa was unique and perhaps the most interesting one in the then India. He was a seasoned politician and a religious reformer. His help to the Pāṇḍava brothers led to their victory at the end. Many are of opinion that Karna was a greater hero than Arjuna, but he was more of an idealist than a politician. Yudhiṣṭhira was cool tempered and great, whereas Duryodhana was vindictive and aggressive. Yudhiṣṭhira’s subtlety in plunging in the second bout of fraudulent and unsuccessful gambling made him lose his kingdom. Apparently, this was foolhardy on his part to stake his wife and kingdom in a crude gambling. Closer reflexion, however, points to a shrewd and sagacious bid of Yudhiṣṭhira, by which he averted the impending war for which neither the Pandavas nor Krīṣṇa were then prepared. Yudhiṣṭhira thereby saved the situation for the time being but the war became inevitable in the long run.

In Chapter II, entitled “The Antiquity of Indian Chronology” the heliacal rising of the Aśvins and the Maghīs have been discussed. The object has been to find out the Rg Vedic antiquity for certain special events. These events, as determined, relate to a period of about 4000 B.C. It may be mentioned that Tilak, from evidences in the vedic literatures
that the vernal equinox once began with the *Orionis* or the *Mṛgširās*, had arrived at same date of 4000 B.C. for vedic antiquity for that period. So also had Jacobi, who found out from two hymns of the Ṛg Veda that at summer solstice, the sun was in conjunction with the lunar mansion *Phālgunī*. His period also came to 4000 B.C. This chapter, although redundant in the context of finding out the time period of the *Kuruķṣhetra war*, is necessary to show that the Indian or the Vedic civilisation in India, was quite mature at that period of antiquity. Hence the *Mahābhārata* period, being later in date, inherited this mature culture and development in all the spheres. Later, it has been found out through diverse methods that the war was fought at or about 3137 B.C. If the antiquity of the vedic culture and also the period of the *Kuruķṣhetra war* at 3137 B.C. is accepted, the 'Aryan' invasion theory does not have any legs to stand on.

In Chapter III, the literary antiquity of the *Mahābhārata* and that of *Kriṣṇa* has been traced. It has been shown that the name of *Kriṣṇa* has been continuously in use since Ṛg Vedic times. In the later period of the *Ūpaniṣadas*, *Kriṣṇa* has been referred to as 'Devakṛṣṇaputra' who can be identified with none other that the *Kriṣṇa* of *Mahābhārata*. Some early epigraphic evidences of the 'Vaiṣṇava' cult since the pre-Christian era have also been discussed in Chapter VIII-Epilogue.

In Chapters IV, V, VI and VII, attempts have been made to find out the time period of the *Kuruķṣhetra war* from (i) writings of classical Greek historians, (ii) traditional references, (iii) Purānic documents, and (iv) astronomical data found in the *Mahābhārata*. From all these a common date at near about 3137 B.C. has been arrived at, and this date has been accepted as the date of the *Kuruķṣhetra war*.

In the last Chapter entitled 'Epilogue' some relevant matters pertaining to the previous chapters have been elaborated, and conclusions have been drawn. The final conclusion is that the *Kuruķṣhetra war* was fought at about 3137 B.C.

I shall be failing in my duty if I do not acknowledge my deep sense of gratitude to those who have helped me through
their inspiration and assistance to produce this work. I freely admit and acknowledge with a sense of greatfulness that I have received enough help from Prof: P. C. Sengupta’s monumental work ‘Ancient Indian Chronology’, and I have quoted him extensively. I express my thanks to Prof: N. B. Mitra M.A., Prof: Jagadish Nārāyan Sarkar, M.A. Ph.D and Dr. Amalendu De, M.A. D. Litt of the Jadavpur University who helped me through their kindness and inspiration. My thanks are also due to Mr. Swapan Kumar Chatterjee, M. A, Lecturer of Sanskrit at the Khalisāni Mahāvidyālaya, Chandannagore, who took the trouble of going through the Sanskrit quotations. I also thank Sri. Kanai Lal Mukhopādhyāya, W.B.C.S, for going through the Ist. Chapter in manuscript form and Sarvasri Gour Kishore Ghosh, M.A, B.T, and Pradip Chakravarty B.A. for going through some portions in printed form. Mr. Dilip Kumar Mukherjee and Mr. Biman Chakravarty, then attached to the executive body of the Indo-German Association, were jointly responsible for arranging my table talk on this subject at the Max Mueller Bhavan, Calcutta. Mr. K. K. Chaudhuri, IRAS of the Eastern Railway, while I was travelling with him to South India, gave me the idea of writing this book, which with the good wishes of everyone has now materialised.

My thanks are also due to Sarvasri E. Varadachari, M.A, IRAS, S. N. Tiwari, M.A (Gold Medalist), IRAS, Satrī, and P. K. Das Gupta, M.A. IAAS for going through the manuscript in parts. I also thank my Publishers, M/S. Ratna Prakashan for their taking interest and enormous trouble in publishing this book. I also take this opportunity to record my sincere thanks to Sri. Girin Bose and Mr. Ashoke Bose of Standard Printing Press for their helpful attitude in printing this work.

It is regretted that notwithstanding my best endeavour in proof correction, a few errors have crept in and I crave the indulgence of the readers for this.

Dated, 1. 1. 1978

A. N. CHANDRA.
CHAPTER I

THE DATE OF KURUKSHETRA WAR
THE BACKGROUND

Modern historians assign diverse reasons for the genesis and growth of hostilities between two parties, and among them, political and economic factors are frequently specified as having a very important and dominant role. Social and personal motivations are disguised under these two factors and cover diverse considerations, such as, political and economic problems. These hinder classification and correct analysis of any such occurrence as a major conflagration. For example, at times, those who are regarded as outcasts and debarred from the most honourable callings and responsibilities of the society rise up against those who deprive them, for the establishment of their own rights. Always despised, periodically plundered and in times of public calamity left to their own devises, they, the common and the ignorant mob, wield such a power as can never be demonstrated even by the most powerful and militant prince. Their need is to get an uplifting to the level of the society around them and minister to their more material necessities. But even such important socio-economic problems are known to have been used for personal considerations by giving these a colour which actually these do not have.

Also, throughout history, race and racial disunity have been ever present with all their distinctive differences and have exploded from time to time in violent paroxysms of racial hysteria. All these and such others are, however, concealed under the garb of political and economic problems. As Gibbon says, "nor has any system of secular ideas been successful in obtaining universal acceptance". This also in some cases, caused hostilities. Gibbon goes on to say that "Europe refused to be unified by the egalitarian plan of the French Revolution"1 and as such, it was a failure and resulted

1. The decline and fall of the Roman Empire (Dell Ed. abridged)
in a fiasco and ignominy. Nepolion was the child of this Revolution, but still, in his later wars, the dominant forces were the love of conquest and a sense of ‘personal aggrandisement’ shrewdly concealed as political and economic problems arising out of the Revolution. These problems were supposed to be “extremely dangerous to the rulers, the nobles, and the clergy of all monarchies” as any problem arising out of socio-economic uprising would.

Also, in the first and the second world wars, the contributory perquisites were political and economic problems and, additionally, the greed to acquire power and obtain possessions. These were the primary considerations with other motivations included. Happily, however, in the heroic age, such considerations may be deemed to have been almost non-existent as the political and the economic condition of the people was not so complicated as in modern times and, it is, at least, doubtful if such lamentable condition was so glaring and acute as it is now. Consequently, other and more conspicuous reasons are required to be sought out for the correlation of a war of such great magnitude as the Kurukshetra war at such a remote date.

Notwithstanding the above generalisation, inference can safely be drawn that in the heroic age certain items essentially constituted the directing force in the causation of hostilities. These may be enumerated here: (i) social inequality resulting in the predominance of one section of the people over the other, (ii) economic subjugation or domination of a section of the people, (iii) personal aggrandisement of the chieftain, or the ruler of a community or a section, (iv) the heroic idea of showing valour in the battlefield, (v) political causes or pseudo-political considerations of various natures, (vi) war for possession of women, or a particular woman, and lastly, (vii) (a) religious controversy between the various established faiths and beliefs and other newly oriented theories, or, (b) the opposition offered by a

2. The Story of the world (Cardinal Ed) : Southworth ; p. 292.
part of the people for the establishment of new ideas invented by them or their leaders. Naturally, therefore, most wars of the heroic age must have been waged for one or more of the above reasons.

The great conflagration at Kurukṣetra at the juncture of the Dwāpara and the Kali era must, consequently, be the effect of one or more causes as set forth above. The five illustrious Pāṇḍava princes, the heroes of the Kurukṣetra war, were reportedly born and reared in the Himalayan region. Their birth was shrouded in mystery inasmuch as their lawful father Pāṇḍu was not their progenitor. He was incapable of producing any offspring. The text states that at his instance, his two wives Kuntī and Mādré, got their offsprings through various deities of the Indian pantheon, viz, Dharma, Indra, Vayu and the Aśvins. Apparently, however, such application was not uncommon in those days, nor was such practice looked down upon. Pāṇḍu himself was the child of such an union and, he was respected and accepted in the status of a prince of the famous Kuru clan without dispute. Pāṇḍu was the younger brother of Dhrītarāṣṭra—the ruling chieftain of the Kuru clan. He went to live in the forest to recover from the evil effects of a curse imposed upon him and, there he died. His sons, the Pāṇḍava children, were, thereafter, brought back to Hastināpur, the capital of their paternal estate.

According to the extant custom, Mādré, the mother of the youngest twins—Nakula and Sahadeva—without any persuasion whatsoever from others and out of her own free

3. Mahabharata, Adiparva: 5.13
4. ibid 126. 1—5
5. ibid 123. 2—4; 124.1.
6. Mahabharata; Adiparva, 118.1
7. ibid 126.1
8. ibid 126
will followed her husband’s footsteps. Kuntī, the mother of the three elder Pāṇḍava brothers, along with some mendicant residents of the same forest, where they have been living, came to Hastināpur with the princes. Doubtless the return of these children to their paternal household was not liked by many of the Kuru clan, particularly by Dhrītarāṣṭra and his children, as legitimately the Pāṇḍavas were the claimants to a portion of the lands and estate hitherto enjoyed by the chieftain and his children. The Pāṇḍava princes were, however, received with ceremony in the royal household by Dhrītarāṣṭra as a necessary formality. They were accepted by grandfather Bhiṣma, their father’s uncle, who was still living and strong.

Here at Hastināpur, the Pāṇḍavas were educated by learned preceptors as befitted the princes of royal blood along with other royal children of the Kuru clan. During training in the noble arts of warfare, in archery, mace battle and wrestling, Bhima and the ambidextrous Arjuna excelled the other royal children causing their extreme jealousy. Although it is not known for certain, the young Pāṇḍava princes were, presumably, ragged for the mystery surrounding their birth by the other Kaurava boys, as it is the habit of the young boys everywhere. Apparently, both the Pāṇḍavas and the Kauravas exhibited cold indifference to each other and being confined to their respective princely habitations remained aloof from their royal cousins except on such occasions as demanded

9. ibid

Talboys Wheeler traces this custom as of Scythian and Thracian origin and states that “two ideas are involved in the later Brahminical rite which find no expression in the early Scythic formnamely, that the act was voluntary on the part of the widow, and that it was associated with a well-grounded belief in the immortality of the soul...The widow, indeed, entered the fire, with a profound conviction that she would thereby rejoin her husband in abodes of bliss.
The Thracians had a similar custom, except that the widow was not burnt, but slaughtered at the grave of her dead husband...”.
Ancient Hindu India, Punthi Pustak, 1961 ; p. 168.

10. Mahabharata ; Adiparva ; 126

11. ibid

128.3
their presence. But their secret contempt, penetrated through this thin and awkward disguise, found expression from time to time. This created a division never to be adjusted in the future. The evidence of their hostile intentions was manifested from their very early youth. This inseparable sense of antagonism, in course of time, developed into a mortal enmity and the final blow was inflicted at the battlefield of Kurukshetra.

This hostility between the Kaurava and the Pāndava princes was further aggravated when Karna, Kunti’s first born and discarded child was debarred from taking part in the competition arranged for the royal children and those of princely blood. This was because of his low origin in the family of Suta Adhiratha12. Actually, however, Adhiratha was not Karna’s father. He only had adopted him after he was discarded by his mother just after his birth and thereby saved his life. Karna was ever grateful to his adoptive father Adhiratha. Duryodhana, the oldest of the Kuru princes, was naturally present in the competition. He could be generous when it suited him. Be it generosity or be it animosity towards the Pāndavas, he made Karna the king of Anga13 then and there before the assembled princes when he was thus refused to be entered in the competition. As a sign of gratitude, Karna vowed eternal friendship to the elder Kaurava prince for saving his face. Karna since then envied Arjuna his proficiency in archery and desired to prove his superiority in the competition. But on being debarred he had no alternative but to retire. But his animosity remained although he was crowned king of Anga and was raised to the rank of a noble.

Such an immense surprise sprung upon the princes by Duryodhana was primarily motivated by his animosity towards the Pāndavas and to prove Karna’s superiority over Arjuna. It was also intended to bring a superior warrior like

12. ibid 136.1
13. Mahabharata, Adiparva; 136.3.
Karna into his own fold and to solidify friendship with him. It is uncertain, however, if Duryodhana thought of a war with the Pândavas at this juncture, but his action in winning over Karna must be regarded as a superior diplomatic manœuvre when measured against future happenings although the guiding force at this period was sheer animosity towards the Pandavas.

It is easy to conceive that the treatment meted out to Karna by the Pândava princes was neither forgiven nor forgiven. He cherished an attitude of unquenchable hostility towards the Pândavas in general and Arjuna in particular throughout his life. Unhappily, this attitude of Karna, ended in death in a fight with Arjuna at the Kurukshetra battlefield. Adhering to the ancient heroic tradition, he never left the banner of Duryodhana although he received a warm persuasion from Krishna and, also, from his mother Kunti. At the same time, before the Kurukshetra war, he came to know from Kriṣhṇa that he was the eldest child of Kunti, who had abandoned him soon after his birth. At this, Karna strongly felt that he had been discriminated against by his own mother. This act of informing Karna about his origin just before the war was a supreme piece of Kriṣhṇa's diplomacy. He knew that Karna was kind and generous. He also knew that his fighting capacity would be impaired if he were aware that the Pândavas were of his own blood, and then, even such a superior fighter like Karna would be perturbed in a fight with Arjuna. Karna so long believed that he was the son of Suta Adhiratha. But when he learned that he was Kunti's son and heard about his mother's delinquency of early youth, he was petrified with agony. He could not, however, forsake Duryodhana in the face of his early promise and for the sake of maintaining the heroic tradition. He also, could not forgive his mother the lapses connected with her early youth.

Thus, Karna may be considered to have been the butt of a social inequality. As compared with the princes of the Kuru and the Pândava clans his position was much inferior
and, always, in his social contacts he was treated as such. This made him vote for the war at a later date. This also made him abuse such stalwarts as Bhisma and Drona although otherwise he was a kind, intelligent, generous and perfectly balanced personality. It also seems probable that Bhisma and Drona knew about his bastardy, and for this, they, particularly Bhisma went out of their way to undermine his merits. These acts of Karna, altogether contrary to his nature, were probably the result of frustration and a sort of inferiority complex which grew upon him as a result of the differential treatment that he had to tolerate.

Duryodhana, on the contrary, was an ego-centric individual and doggedly intolerant. His particular enmity was centred round Bhima, the second of the PANDAVA brothers, who was born on the same day.14 In their early youth, when Duryodhana found that Bhima was as strong as or stronger than he, in physical prowess, he tried to poison him.15 Bhima, however, had the good fortune to survive.16 Further, the members of the Kuru clan, seeing the strength, kindness, goodness and royal bearing of the PANDAVA princes started praising them, and wanted Yudhisthira as their ruler.17 At this, Duryodhana apprehended danger for the future. He thought that he might be overruled for good by the will of the people. He immediately plotted against the lives of the PANDAVAS and sent them to VARANAVATA.18 There he had planned to burn them to death.19 Being forewarned by Vidura20 their uncle by a Sudra wife, the PANDAVAS fled away from the inflammable house built beforehand for their residence, and saved their lives.21 Thus Duryodhana was

14. Mahabharata; Adi. 123.3
15. ibid 128.5
16. ibid 129.2
17. ibid 145.1
18. ibid 143.1
19. ibid 144
20. ibid 145.2
21. ibid 148.2
not found to be sensible of his obligarions and was prone to impatience and dissimulation. He was found to be plotting against the lives of the Pândava brothers since his early youth out of jealousy, ruthlessness, ego-centric individualism and intolerance. He made the war inevitable.

After leaving Vāraṇavāta, the Pândavas travelled from place to place in disguise as Brahmans and their mother Kunti was all along with them. They had to move incognito for fear of their lives as, by this time, they were convinced that the Kauravas were bent upon killing them. There is no doubt, however, that if their identity was disclosed, the Kauravas, who were famous rulers, would come to know in a short while, and would plot to kill them again, and then, they thought, they would have a very slender chance to survive. On their way, they had to stay at a village Ekchakrā by name. There being persuaded by his mother and to save a poor family of Brahmans, Bhima killed Vaka, a Rākṣhasa. Prior to this Bhima had killed 'Hidimvo', a notorious tyrant of the Rākṣhasa tribe and married his sister 'Hidimvā', at her insistence. Ghatotkacha, the Rākṣhasa hero, was born out of this union. The Pândavas could secure a powerful ally in Ghatotkacha, who was destined to play an important role for them in the battlefield of Kurukshetra by saving them on various occasions. He, however, fell fighting bravely at the battlefield of Kurukshetra on the fourteenth day of the war.

From Ekchakrā the Pândavas started for the Pānchala country. At Ekchakrā they had come to know that for the selection of a suitable bridegroom, Yagñasena, the king of the Pānchālas was about to arrange a ‘svayamvara sabhā’ where kings, nobles and Brahmans from all over the country would

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22. ibid 161
23. Mahabharata ; Adi. 156.2
24. ibid 155.1
25. ibid 155.2
26. Mahabharata ; Drona ; 180.2
27. Mahabharata ; Adi. 168
THE BACKGROUND

attend. That, only those belonging to the higher caste of the society was invited to this assembly is in itself a proof that the society was also marked by a social inequality even in those days. A notable fact is that the Brahmins, though poor, were treated as on the same footing with, if not higher than, even the Kshatriya princes. Presumably, the earlier Vedic social structure of equality between the twice-born castes had been superseded, and a new set up, with the superiority of the Brahmins by birth was already established or was about to be established in the then social set up.

Duryodhana and his brothers were also present at the selection party as aspirants for Draupadi’s hand.28 King Yagñasena or Drupada, as he was commonly known, had invented a norm to test the proficiency of the bridegroom in archery.29 Most of the princes tried and failed.30 But when Karṇa got up and took the bow,31 the bride herself protested stating that she would not select any person of lower birth as her husband.32 Consequently, Karṇa had to refrain from taking part in the competition. This clearly points to the caste-ridden nature of the society. Girls of one stratum married persons of the same stratum or of a higher one. This discrimination, presumably, was not confined to matrimonial alliances alone but had spread over in other spheres of life also. In this connection, a reference in the ‘Bhagavat Gītā’ preached by Kuṣumanta to his friend and disciple Arjuna on the eve of the war about the composition of the four ‘varnas’ or castes is noteworthy.33

Arjuna, however, in the guise of a mendicant brahmin, won the bride through his skill and high proficiency

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28. Mahabharata ; Adi. 1861.
29. ibid 185.1
30. ibid 187.1
31. ibid 187.1
32. ibid 187.1
33. Bhagavat Gītā : 4.13

चातुर्वर्ण्यः मया सृष्टिः गुणाकर्मबिविभागः:
Caturvarṇyam mayā sṛṣṭam guṇakarmavibhāgaḥ.
in archery and outshone all the contending princes and nobles. At this, all the princes attending the ceremony were offended and wanted to fight with Drupada as he agreed to give his daughter in marriage with a poor brahmin rejecting the claims of all the princes. Apparently, therefore, after the break up of the selection party, most of the assembled princes including Karna, owing to personal or clannish animosity or to their allegiance to Duryodhana fought the Pândavas. Arjuna took the side of the Pāñchālas and fought valiantly. But this somehow did not take a grave turn at the intervention of Krîṣṇa. He was sure of their identity as his cousins. Later, when the frustrated princes came to know that these Brahmins were none other than the famous Pândava princes, their attitude of hostility towards them further increased. And this speaks of the superior diplomacy of the Kauravas, particularly of Duryodhana, who were popular enough to command such allegiance or that the Pândavas were very unpopular. On the other hand, it may be contended that on such occasions this type of fighting was the custom of the time and the action of the princes did not express any personal or clannish animosity. They joined together for this one purpose of maintaining the tradition only. But, if this is construed to be an out-come of an animosity towards the Pândavas, as this was emphatically the case with Duryodhana, it was kept in abeyance for the time being only to find its merciless expression in a more furious way in the battlefield of Kurukṣetra.

The Pândavas' coming to the court of Pāñchāla calls for examination in detail. It is a fact that for fear of their lives they had been roaming about in the disguise of mendicant brahmins after the Vāranāvata episode. True, that while they were on their way to Vāranāvata they had been warned by

34. Mahabharata; Adi. 187.2
35. ibid 189.1
36. Mahabharata; Adi. 189.1
37. ibid 190.3
38. ibid 201.1
THE BACKGROUND

Vidura about the sinister plot hatched against their lives by Duryodhana, but still, it may be assumed that only out of fear they could not refuse to go to Vāranāvata even knowing fully well that their lives would be endangered. They were obliged to have recourse to a trick to get out of the Vāranāvata plot with their lives. All these go to show that even the immense prowess of Bhīma and the unmatched ability of Arjuna in archery could not make them so confident as to challenge the Kauravas face to face or at the very least, to lodge a strong protest against the heinous plots against their own lives. On serious consideration, it seems, therefore, illogical that they should decide to attend the Pāṅchāla court for participation in the competition, as in any event, their identity as the Pāṇḍavas was likely to be disclosed there. Therefore, there must have been a laudable reason for their precipitate action. Possibly, out of desperation they went to the court as they had to find a strong ally for their survival and for gaining ground. No doubt, Arjuna was absolutely confident of his capability of winning over Draupadi. And this he did. Thus their action in going to the Pāṅchāla court out of desperation brought about the desired result. Here they got a wife, and a very powerful ally in Drupada. Here also for the first time in life they met their cousin Krīṣṇa. Thus as an event, the Pāṇḍavas' coming to the court of Pāṅchāla be construed as a turning point in the course of the history of the Mahabharata.

The marriage of Draupadi with the five Pāṇḍava brothers was not in conformity with the existing custom, and earlier dictums had to be invoked to solemnise the marriage. Apparently, "monogamy and polygamy seem to have been the recognised institutions in the family history of Hastināpur"39, but this is possibly the solitary instance where practice of polyandry was resorted to within the framework of patriarchal pattern of society.

At this juncture, at the 'svayamvarā sabhā' of Draupadi. Krīṣṇa, although not an aspirant for her hand, makes

his appearance for the first time. All this time he was engaged in fighting Kamsa of Mathurā and Jarāsandha of Magadha, Kamsa's father-in-law. He was related to the Pāṇḍavas but so far it appears from the Mahābhārata text, he had no occasion to meet them earlier. Krishṇa's maternal uncle Kamsa, the king of Mathurā, was a scion of the old order and admittedly a tyrant. In his childhood, Krishṇa's life was threatened by this uncle. Consequently, just after his birth he was removed to Vrindāvana, and there, he was placed under the care of a relative Nanda Gopa and his spouse Yasodā, who were 'vrātya kṣatriyas'.

They reared him like their own son. Later, Kamsa was killed by Krishṇa while he was in his early teens. This made Jarāsandha very angry, and he attacked Mathurā several times. The people of Mathurā, however, implicitly believed in Krishṇa and his capability to extricate them from the present peril, they fled to 'Dvārakā' near the present Arabian sea at his direction and this all out exodus was personally led by Krishṇa. There they found a kingdom of the Yadus, Brīhṇis, Andhakas and others.

Jarāsandha of Magadha was a very powerful king of the time and commanded respect from many for his military power. He had conquered many countries and kept many princes as his captives. Krishṇa knew that his tribe of the Yadus and Brīhṇis was no match for the trained and well equipped army of Jarāsandha in the event of a regular war. He was also astute enough to perceive beforehand that in any war against the Kauravas, Jarāsandha was sure to side with Duryodhana. Hence Krishṇa managed to have Jarāsandha killed in a duel with Bhīma, and earned further enmity of many Indian satraps of the period. Further, he took Rukmini as his wife, who was betrothed to Siśupāla of Chedi. Krishṇa had to kill him at the Pāṇḍava court during the

40. Harivamsa: ch. 60.
41. ibid 92.
42. Mahābhārata: savaparva; 23.1
43. Mahābhārata: sava: 44.1
'Rājsūya sacrifice' held at Indraprastha at a later date for his obstinacy and arrogance. This also made him an enemy of many rulers including Duryodhana of the famous Kuru clan.

The Mahābhārata account of the early life of Krishṇa is somewhat sketchy. It is only concerned as far as he was connected with the Pāndavas or as much as he was involved in the Kurukṣetra war. The actual political background in which he found himself after he killed Kaṁsa is not fully revealed there. After this episode he placed Ugrasena, the father of Kaṁsa, as the king of Mathurā⁴⁴ and at this, Jarasāndha became very angry and besieged the town of Mathurā. Various other rulers of the period, who were either his subordinates or his friends, followed suit. Among those who allied themselves with Jarasāndha were the kings of Kaliṅga, Chedi, Aṅga, Baṅga, Kaśi, Daśārṇa, Summa, Videha, Madra, Kaśmir⁴⁵ and many others. The fight did not augur well for Jarasāndha and, consequently he had to retreat. Again, on another occasion, Jarasāndha attacked Krishṇa in the 'Gomantha hills'⁴⁶ but there also his intentions were foiled.⁴⁷ At the instance of their uncle-at-law Damaghosa, the king of Chedi and the father of Siśupāla whom Krishṇa killed later, Krishṇa and Baladeva went to the city of 'Kara-vira'. But the king of Karavira, probably because of his friendship with Jarasāndha, fought with Krishṇa but died at his hands at the battle.⁴⁸ After this, Śalya, the king of 'Sauva' and a friend of Jarasandha, requested 'Kāla-Yavana', the king of the 'Yavana' country, to lead an army against Krishṇa to which he agreed⁴⁹ and, he also, in a fight lost his life. Hence, at the time most of the kings and rulers of India were against Krishṇa but could not defeat him for his strength, valour and superior tactics. But, he was astute enough to be aware that

⁴⁴ Harivansha ; ch. 88
⁴⁵ ibid 90
⁴⁶ ibid 98
⁴⁷ ibid ch. 99
⁴⁸ ibid 100
⁴⁹ ibid 110
this piece of fortune could not continue for long and within a short time he would be killed by fair means or foul unless he could gather round him a number of powerful friends and allies and could also somehow kill his enemies in war or otherwise. On the balance of evidence, therefore, Kṛiṣṇa had need of the Pāṇḍavas as they had of him and, according to some, the battle of Kurukṣetra was a piece of his diplomatic manœuvres so that he could get rid of his enemies at the cost of other warriors of the period.

In the Mahābhārata, Kṛiṣṇa is found to have favoured the Pāṇḍavas and act as their chief adviser. No doubt, he had need to have a powerful group of friends and supporters with whom he could combine hands for his own safety and also for the establishment of his new religious doctrines. The Pāṇḍavas were readily available. They were his cousins and of royal extraction. They were deprived of their paternal holdings, and were vehemently disliked by the orthodox faction of the ruling hegemony for their physical prowess and for their religious doctrines innovated by Kṛiṣṇa. They further earned their enmity for winning over Draupadī but apparently, had developed a complex for their alleged mysterious birth. On the other hand, they were brave fighters, reliable and for their royal blood commanded respect from some.

The Pāṇḍavas had neither wealth nor followers and supporters except a minor section of the people. They were desperately in need of friends and supporters and got Kṛiṣṇa as their greatest ally. On the other hand, Kṛiṣṇa wanted some people from a powerful clan as his followers to thwart the combined efforts of the rulers who were against him. These rulers were after his life. They were also putting obstructions to his establishing a new religious order based on moderation and doctrine of selfless work and equality. Infact, his teachings in the Bhagavat Gītā must be regarded as a deviation from the orthodox Vedic cult of sacrifice, and were based on unselfish work, spiritual sublimation of the self and egalitarianism.
Krishna left an indelible stamp of his presence of mind in tackling intricate political problems. He stealthily paved the way of the ascendancy of the Pândavas by helping to create a body of supporters and by eliminating the most powerful of their adversaries. He, thereby, counteracted the ever increasing power of Duryodhana, who wanted to use the then rulers as his pawns for the realisation of his material interests. Krishna, however, brought a cleavage in the Kaurava camp with well calculated measures to disrupt the unity of the oligarchy, who had substantially usurped political power taking advantage of the indifference of the people and the prevalent political, social and religious conditions. Thus, notwithstanding the weakness of the Pândavas, this alliance of Krishna with them made the war a possibility.

During that calamitous period every instant of the Pândavas was marked with urgency; the approaching confusion, the scarcity of friends and supporters posed difficulties from which they could not extricate themselves easily. These were a constant source of anxiety but the long established institution of marriage, or rather political marriage came to their immediate rescue. Further powerful and political support was available to them from the institution of marriage. Arjuna contracted a political marriage by eloping with Subhadra, the sister of Baladeva and step-sister of Krishna, and thus ensured the support of the powerful tribes of the 'Yadus', 'Brihñis' 'Andhakas' and others. Earlier, Bhima by marrying 'Hirimbā' became the father of 'Ghatotkacha', who, with his Rākṣhasa followers joined the Pândava side at the Kurukshetra war. Nakula, the fourth Pândava brother, married 'Karenumati' sister of 'Dhriṣṭaketu' of Chedi. Even during the confusion of the times, the Pândavas got Abhimanyu, the son of Arjuna and Subhadra, married to Uttarā the princess of Matsya and daughter of Virāta and obtained the allegiance of the king and his army. But the most important was the Pândava brothers' marriage with Draupadi. Thereby, they got the support of Drupada, king of the Pāñchāla country, who was
one of the most important rulers of the time. He joined the Pāndava side wholeheartedly, not only because they were his sons-in-law, or because he had clannish enmity with the Kurus but also because the other Indian rulers and satraps behaved ill with him after the ‘sāyamvarā sabhā of his daughter Draupadi. Thus fostered by their powerful connections and their friendly support, the ambition of the Pāndavas to recover their birthright bolstered up and led to the more embittered conflict which broke out at Kurukṣetra.

The burning of the Khāndava forest with the help of Krishṇa, which rightly or wrongly some scholars ascribe to the intention for the further colonisation of the expanding Aryan race, helped the Pāndavas to acquire considerable territory and to establish Indraprastha as their capital. The palace that they constructed was stated to have been a unique piece of workmanship executed by ‘Maya’, of the Dūnava family. Duryodhana had come to the palace as an invitee to the ‘Rājsuya Yajña, that was being performed by king Yudhīṣṭhira, and though accustomed to all amenities available at the remote date, was made a fool of. He saw water where there was no water, and solid floor where there was water, and became the object of ridicule of the assembled princes. This made the vain prince annoyed, angry and jealous. His anger multiplied when Krishṇa had killed Śiśupāla, one of his most powerful and staunch supporters. In the ‘Yajña’ performance, according to custom, the place of honour or the ‘argha’ was proposed to be accorded to Krishṇa as being the most honourable personality in the assembly but Śiśupāla of Chedi, a stubborn and an old enemy of Krishṇa objected to this. He became obnoxious and abusive, and was, consequently, killed by Krishṇa after he was given several warnings. This act of killing Śiśupāla, although prompted by

50. Mahabharata: savaparva: 3.3
51. Ibid 46.1
52. Ibid 64.
53. Ibid 44.1
personal considerations was a superb piece of Krishña’s diplomacy and, as a matter of fact, lessened the strength of the Kaurava supporters to a great extent. Duryodhana, though fuming at the death of Śiśupāla, could do nothing; but his losing face at the earlier palace episode and the killing of his friend and supporter made him so much enraged that this made that proud and ego-centric prince a mortal enemy of the Pāṇḍavas. This, in due course, found its expression in the battlefield of Kurukṣetra.

The last effrontery committed by Duryodhana on the Pāṇḍavas was when he invited and defeated Yudhiṣṭhira in fraudulent dice\(^{54}\). He and his younger brother Duḥsāsana, after winning over Draupadi, tried to denude her before the entire Kaurava court\(^{55}\). At this act of indecency, only a mild and lip protest was vouchsafed by grandfather Bhīṣma, preceptor Dronā and the king Dhṛtarāṣṭra while Vidura strongly protested against this\(^{56}\). Apparently, Duryodhana, although only a crown prince, had become so powerful and so full of arrogance that this was of no avail. He was not amenable to reason and continued with his indecent acts and gestures. Bhīma, labouring under extreme emotionalism, then and there pledged himself to kill and drink the heart’s blood of Duḥsāsana\(^{57}\) and break the thigh of Duryodhana\(^{58}\). This he fulfilled at a later date. Draupādi and the five Pāṇḍava brothers were, however, released from their bondage at the personal intervention of king Dhṛitarāṣṭra\(^{59}\), who took Duryodhana to task for his indecent behaviour to a lady of the clan, and personally allowed Draupādi and her husbands the boon of freedom\(^{60}\).

\(^{54}\) ibid
\(^{55}\) Mahābhārata; sava; 66.3
\(^{56}\) ibid ch. 61, 62, 64.
\(^{57}\) ibid
\(^{58}\) ibid
\(^{59}\) ibid
\(^{60}\) ibid

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Whether or not Yudhishthira liked this freedom obtained through the insistence of Draupadi is uncertain. But his action in his throwing himself again into another bout of gambling may be taken as an indication of his innate desire to be relieved of the responsibilities of the kingship and its wealth and glamour. Superficial observation reveals incomprehensible stupidity in his plunging into this subsequent bout of gambling, but probably it comprised a subtlety that was ever heard of. In the core of his heart he knew that without gambling he had no other way out from the hazards that would be put on his way by Duryodhana and his followers. His heart was possibly aching at the growing feuds and animosities with other princes which was on the increase in direct proportion to his acquiring power and prestige. He, therefore, seized upon the first opportunity to accept the invitation to play dice even in the face of strong opposition from Draupadī and his brothers. This was probably the only respectable way to get rid of the kingdom, which, although acquired with great difficulty, would create more enemies for himself and his brothers than before. Besides, according to the custom of the times, refusal to take part in such gambling invitations indicated cowardice and consequently, was dishonourable for a king. So, again in another gambling bout he lost their freedom, and the five brothers with their common spouse Draupadi went to the forest for twelve years with an added year to live incognito.

During the last year of this period, when they were living in the house of Virāta of Matsya country, the Kurus came to lift his cattle wealth. But they were driven away by the

60. ibid  
61. Mahabharata ; sava ; 75.1
extraordinary bravery and markmanship of Arjuna. After their reappearance on completion of thirteen years’ exile, the Pāṇḍavas demanded their patrimony, but Duryodhana, in spite of better advice from his elders, refused to concede to their demands. He stated that he would not release even the smallest portion of land without war. Most of the older people present at the court were in favour of conciliation. But the unlimited arrogance of Duryodhana prevented him from listening to good advice offered. He would adhere to his previous statement at any cost. Later, Kiṣṇa went to the Kaurava court on a peace mission. He made a last attempt, although he knew it was destined to failure. Even his superb oratory nicely mingled with diplomatic subtleties failed to create any impression in the Kaurava camp. On the other hand, Duryodhana tried to make him a captive. It is with uncommon intelligence that Kiṣṇa managed to extricate himself from this jeopardy. And though bad, Duryodhana had the grace to accept the inevitable.

Thus, war became inevitable and against this background Kurukṣetra war has to be examined. An analysis of the facts set forth in the foregoing paragraphs reveals that social inequality based on birth and position played quite a significant part; and people belonging to higher positions and having blood connections with the elite enjoyed certain privileges that were generally denied to the mass of common people. In the background, throughout the unfolding of the story, an under-current of discord and hostility against the ruling hegemony is clearly discernible. The common people were indifferent to what the rulers engaged themselves with, and what befell them as a result of their personal feuds and the terror of arms kept them in check. As for example, the people of Mathurā and Magadha did not concern themselves with the death of their rulers at Kiṣṇa’s or Bhīma’s hands. Contrary to all expectations they, at least the people of

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62. ibid virata 53-67
63. ibid udyoga 26.
64. Mahabharata; udyoga; ch. 29.
Mathurā, joined hands with Krīṣhṇa, the killer of their ruler. This inevitably indicates that the common people were disinterested and unhappy, and it can be surmised that they were living under a tyrannical rule. They probably wanted a change in the administrative machinery for the better, and welcomed it when it came. But, apparently, they were reluctant to take the matter into their own hands probably on religious grounds which taught them to revere their king as the incarnation of God.

Exploitation of the common people by the rulers or a privileged section cannot also be overruled. On the other hand, it may be assumed that this was the extant social custom, and to some extent slavery and free and forced labour were deemed to have been imposed upon the so-called non-Aryan or the Dāsa tribes, who had not yet been fully indoctrinated to the mysteries of the Vedic sacrificial cult. There is ample evidence in the Mahābhārata that from time to time economic crisis developed for want of food, and probably also of clothing owing to draught and famine, and the common people naturally suffered. Such conditions could only be redeemed by raids on adjoining lands or on the cattle wealth of the contiguous land-holders of the non-Aryan tribes and also on the rich Aryan tribes nearby. This always caused enmity lasting even for generations. One such example of a cattle lifting raid was that of Duryodhana, when the Kauravas went to steal the cattle wealth of Virāṭa, but the circumstances of the raid, that is, whether the raid was enacted to redeem the exigencies of circumstances or for sheer greed is neither known nor can be ascertained correctly.

The immense arrogance and lust for power and position as exhibited by Duryodhana only added fuel to the fire and hastened the cause of the war. Duryodhana was proud, powerful, intolerant and arrogant. But his maniacal hatred of the Pāndavas probably developed after he had lost the fight in Virāṭa's territory during the cattle lifting episode. There he lost the fight and had to surrender the cattle as well, which he
and his party including Bhīṣma, Karṇa and Droṇa had misappropriated. Puffed with arrogance he was also unreasonable. Reasonableness has been defined and equalised in the Scriptures as a godly quality derived from ‘the wisdom from above’ (James 3:17). Basically, it indicates a fair and yielding nature, moderate and considerate, and above all, forebearling. Duryodhana had none of these qualities. He resorted to unfair means to burn the Pāṇḍavas to death at Vāranāvata, and became a party to fraudulent and unfair gambling in which the Pāṇḍavas lost their all. He was also of an unyielding nature and, in spite of recommendations from his superiors, and even from the great patriarch Bhīṣma, he did not consent to yield even a small portion of the property to the Pāṇḍavas, which by birthright was their due. Also moderation was never found to be one of the traits of his character. Despite the inevitability of the war, he acted as if he did not care and thus hastened the massacre. When Krīṣṇa went to the Kaurava court and failed in his peace mission, Duryodhana did not exhibit any moderation in his behaviour nor was he considerate. In fact he was inflexible. Above all, he had no forbearance. Even in the estimation of his own mother Gāndhari and his father Dhrṛtarāṣṭra, he was guilty, although they can not be taken to have been influenced by prejudice. His unreasonable insistence led to a merciless attitude and his character was in stark contrast to that of Yudhiṣṭhira and Arjuna, both of whom were aggrieved at the thought that so many of their friends and kinsmen would have to embrace death for their clannish feud. Thus, all his actions were, more or less, guided by the motive of personal aggrandisement which none of the other characters in the entire Mahābhārata exhibited so glaringly.

On the contrary, Karṇa although at least twice insulted according to the text, was a perfectly heroic character with a considerable amount of romanticism and generosity in his make up. He was kind and generous, a hero and a romantic and was prepared to go to the limit of his resources to remove
the wants of the needy, and for the sake of maintaining his ‘dharma’. In trailing the story, it is seen that he actually gave away his natural ‘kavacha kundala’ to Indra, who in the guise of a brahmin demanded and obtained his safeguard for the safety of his son Arjuna. Instead he gave him an ‘ekāghnī astra’ or one killing weapon. This he kept securely for using against Arjuna, his mortal enemy; but he had to use the same on Ghatotkacha, when, this progeny of Bhima, was creating terror and became the engine of devastation in the battlefield on the fourteenth day of the war. This he did out of sheer kindness to Duryodhana. Kindness towards others, however, is not limited to only being forgiving or to bestowing one’s resources on others. At times, one may be prone to take liberties with those very close to him but when dealing with strangers he may be quite the reverse. This is not kindness in the true sense. While Karna showed such kindness to many, he apparently, harboured a strong resentment against Arjuna and Draupadi. When Draupadi was brought to the Kaurava court, after Yudhishthira had lost her in the gambling, Karna’s speech expressed his strong animosity towards her. Perhaps he could not forgive her for insulting him in the Pāṇchāla court. He, also, has been found to have taken liberty in speech with Bhīṣma and Droṇa, but while Bhīṣma was on his death-bed he atoned for his previous lapses. Thus, he may be considered to have wanted the war with the heroic idea of showing valour in the battlefield before Arjuna and grandfather Bhīṣma. This was denied to him throughout his career, except in the battlefield of Kurukṣetra, for his allegedly low origin. The rest of the kings and the rulers who joined in the war were led by various political and personal reasons of different natures.

Although obtaining the physical possession of Draupadi was not the direct cause of the war, her indirect contribution to the cause of the war was not inconsiderable. At the archery

65. Mahabharata ; sava ; ch. 69.
66. Mahabharata ; Bhismā ; ch. 124.
trial arranged during her ‘svayamvarā sabhā’, all the kings tried and failed; but Karṇa was insulted by her and was not even allowed to take part in the competition for reasons of his allegedly low birth. This made him self-conscious and bear an attitude of grudge towards her. Arjuna’s superb performance with comparative ease alienated most of the princes assembled at the Pāṅchāla court; they after the trial, joined together and started to fight with the king of Pāṅchāla, when Arjuna sided with the Pāṅchālas. Although at Krīṣṇa’s intervention, the situation was not aggravated, still, many of the princes harboured a grudge which found its ultimate expression in the battlefield of Kurukṣetra.

Draupadī appears to have been a proud and an extremely sentimental lady; she always tried to incite Bhima by her cajoling on many occasions—when the Pandavas lost their possessions in gambling, when they were living as not much honoured members of the Virāta household, and also, later, after the war, when her five children were killed by Asvāṭhāmā while asleep. Doubtless there were adequate reasons for losing her temper; but the fact remains that the act of drinking the blood of Duḥśasana by Bhima, the killing of Virāta’s brother-in-law Kichaka who tried to seduce her, and also the circumstances of Asvāṭhāmā’s humiliation, after he killed her five sons, were her contribution.

In history, women have been the cause of strifes and warfare on innumerable occasions directly or indirectly, as is evident from the history of the Greek Helen and the Rājput Padmini. Generally speaking, such wars have been fought for the possession of a number of women, or a particular woman, but in the Kurukṣetra war no such cause appears to have been present; no one seriously desired to take physical possession of Draupadī. Therefore, her contribution was indirect but extremely effective. True, she was much sought after before her ‘svayamvarā sabhā’, there was a fight after the event, Duryodhana won her in the gambling, but all these indicate hostility against the Pāṅchalās or the Pāṇḍavas and not for taking
possession of her just as Paris wanted to take possession of Helen. Therefore, she remained in the background throughout but furnished incitement to the cause of the war.

The last but not the least important issue has been the religious disharmony between various sects of people. Many a time in history military strength had been displayed, as is evidenced from the crusades to the communal riots, to portray the martial and ambitious spirit and to have a share in the establishment of the superiority of one faith or another. Talboys Wheeler states that 'the history of the people of India if considered as something distinct from the annals of conquest, is emphatically a religious history; and so closely has every act and duty been associated from time immemorial with religious belief in the mind of the Hindu, that we are enabled by means of the religious books which have been preserved, to obtain a tolerably clear insight into the important changes which have taken place at different intervals in the manners and ideas of the people at large.' These important changes necessarily permeated the entire society very slowly and within the realm of the Vedic religion which was mainly based on sacrifice offered to various deities of the then existing Vedic pantheon.

Gradually, a section of the people did not place implicit faith, as before, in the efficacy of the cult of sacrifice and in the superiority of the ruling deity Indra. Notwithstanding his previous prominence, anti-Indra cult obtained a definite footing and crept into the sinews of the society. At first, the religion of the Vedic period consisted of offerings of food and wine accompanied by prayers to the various Vedic deities and other 'personified abstractions' in order to gain such material benefits and blessings as health, prosperity, long life, abundance of sons, cattle and harvests. These material munificence of the Vedic deities did not or could not satisfy the aesthetic ideology of the people. In course of time, the people in general and philosophers in particular changed their ideals and reposed

their faith in other and more modern doctrines like those found in the Upaniṣhadas.

Gradually, therefore, during the later Vedic period, when the Upaniṣhadic truths were coming into fore, quite a number of people did not like to place their implicit faith in the Vedic cult; contrarily they were more inclined to accept the modern ideas of the Upaniṣhadas. According to Heinrich Zimmer the later and the more matured Indian philosophy, imparts information concerning the measurable structure of the psyche, analyses man’s intellectual faculties and operations of the mind, evaluates various theories of human understanding, establishes the methods and the laws of logic, classifies the senses and studies the process by which the experiences are apprehended and estimated, interpreted and comprehended. This stabilisation and method in the process of thinking did not come into effect within a short period and is definitely an improvement on the earlier cult and consequently, was accepted as such by many.

Originally, the Vedic pantheon with its host of gods depicted the universe as filled with projection of man’s experiences and ideas about himself. In consequence, the Indra of the Vedic pantheon was considered to be a superman endowed with cosmic powers and he could, it was believed, be invited as a guest to receive oblations. This Vedic pantheon of gods was, in fact, ‘invited, invoked, flattered, propitiated and pleased’. At this time the acceptance of the authority of the Vedas was a practical admission of orthodox faith in religion and presumably, those who did not do so were ostracised by the priestly order. Apparently, the ‘influence of the clergy,’ as Gibbon says in connection with a later period ‘in an age of superstition, might be usefully employed to assert the rights of mankind, but so intimate is the connection between the throne and the alter, that the banner of the church has very seldom been seen on the side of the people’. This

69. ibid
70. The Decline and the Fall of the Roman Empire: Ed. Gibbon (Dell. Ed. Ab) p. 24.
statement of the great historian is equally true in respect of the period of antiquity, and is applicable everywhere. The body of the priests of the later Vedic times, with the aid of their ruler, were hand in glove in usurping the interests of the common people and could not be easily dominated. As is common with human nature, the people felt the need for a change, a change in religious doctrines and also change in civil administration; but they were so deeply indoctrinated with the idea of ‘godliness’ of their priests and their rulers that, even if they desired it, they were not capable enough or tenacious enough to assert their rights against the enterprises of an aspiring prince or against a co-ordinated body of priests. They could only show their preference for a new doctrine or appalaude a new ruler if the existing one was replaced by death or by some other means and that even surreptitiously.

Trailing back the religious history of India it is found, that in the Vedic period itself, and down to the Buddhist period, there was an undercurrent of religious differences resulting in petty strife. The circumstances of the differences between Vaśistha and Viśvāmitra may be taken for an example of such a controversy. Later, when the Upanishadic truths were being brought into the fore, there was an undercurrent of disbelief in the Vedic pantheon of gods, more particularly in Indra, the king of gods and the most powerful among them; such disensions were, however, not always silent. In a Rig Vedic hymn the composer Gritsamada states:

\begin{equation}
\text{वं सम पृथ्च्छन्निं कूडः सेति धोरम्}
\text{उतेमाहुर्मशा अस्तित्ये नम्}
\text{सो भयं पुरीविज्ञ दूवा मिनाति}
\text{श्वस्मै धत्स स जनास इन्द्रः} \text{||}
\end{equation}

Yāṁ Smā prccchanti kuha Śeti ghoram,
Utēmāhr naiśo astiti enaṁ.
So ryaḥ puṣṭir vija ivā mināti
Śradasmai dhatta : sa, Janāsa Indraḥ.

71.R.V. 2.12.5
“Of whom the terrible, they ask, Where is He? or verily they say of him, He is not. He sweeps away, like birds, the foes possessions. Have faith in Him, for He, O men, is Indra”

(Griffith’s translation)

From this, it appears that some people at least had no faith in the existence of Indra and questioned the greatness of his powers. Further in another hymn it has been stated:

“Striving for strength bring forth laud to Indra, a truthful hymn if he in truth existeth; One and another say there is no Indra. Who hath beheld Him? Whom shall we honour?”

(Griffith’s translation)

This anti-orthodox or rather anti-Indra feeling is exposed more glaringly in the story of Krīṣṇa’s holding the ‘Giri Gobardhana’ in spite of heavy rain which was supposed to be one of the manifestations of Indra’s supreme cosmic powers. Also, non-belief or partial belief in the Vedic cult is also expressed in the ‘Bhagavat Gītā’ which contains philosophical advice of Krīṣṇa to his cousin and disciple Arjuna on the eve of the Kurukṣetra war. Krīṣṇa states:

यावानरथ उदपाने सर्वभात: संप्रभुतोदकः
तावान् सर्वभेषु वेदेषु व्राह्सणस्य विजानतः

Yāvānarthā udāpine sarbbatāḥ Sāṃplutodake
Tavaṁ sarbbeṣu vedēṣu brahmaṇasya vijānataḥ

“Whatever transitory material pleasures have been described in the Vedas are obtainable by the Brahmavīds who are of one and single mind and are attached with the permanent bliss of Brahma”; also while describing the requisites of such persons as are fit enough to attain supra-consciousness or the state of perfect bliss (samadhi), he says that, those who perform sacrifices in order to obtain the pleasures of this world, are not fit to obtain perfect bliss. In the Mahābhārata itself, the Vedic sacrificial ceremonies or the ‘karmakānda’ has not been accorded a prominent place; but superiority of spiritual learning

72. R.V. 8.89.3
73. Mahābhārata ; sava ; ch. 40
74. Bhagavat Gītā ; 2.46
75. Bhagavat Gītā ; 2. 42-44.
has been eulogised. Further, in connection with the burning of the Khāṇḍava forest, it is stated that 'Hutāsana' or 'Agni' (fire) was satiated with the fumes of the sacrificial 'ghee' or clarified butter and wanted a change of diet. This indirectly bespeaks the futility of the Vedic rites when Agni, the carrier of food to the gods was himself disgusted with the futility of sacrificial rites.

No doubt, during the later Vedic period of the Mahābhārata, there was an under current of anti-Vedic feeling. Kiṅḍuṅa, although exceptionally well versed in the Vedic literature and the Vedic cult was aware of the futility of the sacrificial doctrine, and consequently, did not place implicit faith in the Vedic religious beliefs; whereas, the orthodox group of rulers headed by Jarāsandha and later by Duryodhana were firm adherents of the orthodox idealism. Headed by Kiṅḍuṅa, therefore, the Pāṇḍavas were included in the fold of a party of dissentors who did not believe in the orthodox idealism. They did not believe in the sacrificial cult; they were unattached workers and they worked for the sake work only and did not crave for the result.

This ushering in of a new faith, while the Vedic cult was holding sway, required courage and foresight. The coming into existence of such a state of affairs depended partly on favourable circumstances and partly on the capacity of the reformer. Considering the circumstances, although favourable to some extent, this was not a mean achievement. The country was in the throes of potential disunity among the rulers, the society was caste ridden, priesthood was predominant, and consequently, the lower strata of the society was aggrieved. The people looked forward with eager anticipation to the prospect of a favourable change in the circumstances. They wanted peace and security and were aware that this could come only through completely different ideologies and social systems. They could not expect this change from the political government. Such governments use religion for their selfish purposes; but, at a later stage, they would tire of religious interferences in their own functions and become apprehensive of the growing
influence of the priesthood. Their normal work would be interrupted and their normal functions would be usurped, and naturally, they would, instead of the people, come into conflict with the priestly order. In course of time, the priestly brotherhood would lose their value for which they were created. Also, while stamping out these old and consequently, impoverished doctrines, they were sure to be involved in new and fresh feuds making life intolerable to the people in general. Krisna, taking advantage of this situation, preached his new doctrine of selfless work and established the same.

Thus looking briefly at the background of the Kurukshetra war, it is found that all the necessary elements detailed at paragraph 4 above are present except possibly one, and that is the item under (vi), war for possession of women. The social inequality resulting in the predominance of one section of the people over the other is one of the evils which arise naturally out of the institution of kingship and cannot be averted. Social difference between persons of different strata of the society is palpably evident from the story, of Karna, who on account of his alleged low birth, was denied many privileges automatically vested in his social superiors. Economic subjugation is also an allied evil resulting out of the socio-political nature of the government and the existence of the priestly brotherhood, which usurped the rights of the common mass of the people to maintain their superiority and splendour. Personal aggrandisement was the primary motivation of Duryodhana but the heroic idea of showing valour in the battlefield, as discussed before, was present in Karna for various reasons. The last but not the least important item, viz, religious differences between various established faiths and other newly formed theories are clearly manifest in the then transitory period of the religious ideals. Thus, in conclusion it may be asserted that most of the factors enumerated previously have contributed, directly or indirectly to the outbreak of the Kurukshetra war.
CHAPTER II

THE ANTIQUITY OF INDIAN CHRONOLOGY:
THE HELIACAL RISING OF THE ASVINS.

Doubtless, it would be improper to make an attempt to ascertain the date of the Kurukṣhetra war before solving the question that has been raised by many oriental and occidental scholars. This question concerns whether the event has any historical truth; or the events incorporated in the Mahābhārata text are to be treated only as myths. The same question was also raised in connection with the truth and the venue of the Trojan war. Fortunately, the site of the city of Troy was unearthed, after diligent search, by Heinrich Schliemann in the year 1871; and hence the Homeric statement was vindicated. Recently, however, Prof. B. B. Lal of the Kurukṣhetra University has, after preliminary excavation at an area near the present Kurukṣhetra in the Punjab, and also elsewhere, unearthed some sites; these he identifies with the Puranic cities of Kaushāmbi and Hastināpur and has partially confirmed the Mahābhārata accounts of these two cities. No doubt, the balance of probability precludes the discovery of any epigraphic or numismatic evidences of so remote a period. Besides, the geo-physical condition of India, with its humidity and its living matters in the soil ill favours the discovery of any such evidences and such physical evidences, therefore, can hardly be expected. Hence, till such evidences are available, all approach to date the period of the Kurukṣhetra war must be undertaken from the Puranic records only. Incidentally, from the excavation reports of Prof. Lal and also from other Puranic documents, scholars find that “the totality of the available evidences makes a reasonable case for the historicity of the Mahābhārata war”.

Notwithstanding the fact that some scholars place their faith in the historicity of the Kurukṣhetra war, the time element

1. Hch. Schliemann Olympia—Verlag Gmbh, 1948, P. 6,
2. Dr. L. Gopal : quoted from ‘The Statesman’ dated 3.11.74.
of the advent of the Kali era and, consequently, the date of the battle has been the subject matter of controversy; and various dates ranging from 800 B. C. to about 5100 B. C. have been proposed for the period of the battle. Such a wide gulf of variation between these dates for the period of the war, does not help in any way to re-construct the history, nor does this throw any light on the proto-history of India. Recently, various eminent scholars have expressed their opinion in regard to the approximate date of the event. The most popular among these dates are enumerated below under four headings from the earliest to the more modern dates:

(i) the date of war at about 5100 B. C.
(ii) " " " 3100 B. C.
(iii) " " " 1400 B. C.
(iv) " " " 900-800 B. C.

All these dates, however, cannot be correct. The time periods (i) and (iv) above, neither conform to the traditions extant in the country nor are these acceptable with reference to the available Puranic data; nor even does the calculated date obtained from the Astronomical data preserved in the Vedas and the Mahābhārata itself conform to these dates. The remaining two categories for the period of the war, viz, (ii) at about 3100 B. C. and, (iii) at about 1400 B. C. mentioned above need, therefore, thorough examination to ascertain their actual feasibility.

Before any endeavour is made to fix a date line to the Kurukṣetra war, say before 1400 B. C, it becomes incumbent to prove beyond any reasonable doubt that the Indian civilisation, i.e. the Vedic civilisation in India, belonged to such an early period. Since, neither the Vedas nor any of the Purāṇas contain, or can contain, any absolute time period, any such attempt is likely to be fraught with unsurmountable difficulties. Reasonably, therefore, in such cases, only the balance of probability should be taken to construe the feasibility of the case presented. Prof: Max Mueller, the great Indologist, has arrived, from literary evidences at a period of about 1200
B. C. as the latest date "at which we may suppose the Vedic hymns to have been composed". This conjecture, although opposed by other renowned scholars, albeit places the time element of the Kurukshetra war to period much later than 1200 B. C. But from the Astronomical references in the Vedas, as far as it can be ascertained or surmised, a far anterior date is arrived at. This method of calculation, although precise and correct if proper and unambiguous data are available, also forms the basis of controversy among the renowned orientalists.

It has been argued by Jacobi "on the strength of two hymns in the Rig Veda that the year began with the summer solstice, and that at the solstice, the sun was in conjunction with the lunar mansion Phālguni" and "given this datum, the precession of the Equinoxes allows us to calculate that the beginning of the year with the summer solstice in Phālguni took place about 4000 B. C.". This date arrived at from the data supplied by Jacobi, is in conformity with the date arrived at by Tilak from another source. It is, however, contended that the argument preferred by Jacobi "must be considered further in connection with the dating of the next period of the Indian history, but for the dating of the Rig Veda it is certain that no help can be obtained from it. It is further contended that the above premises of Jacobi "rests


Non supporters of Astronomical theory :

Supporters of the Astronomical theory :
Jacobi, ZDMG, vol. XLIX, pp. 218, L. 69 ; JRAS. 1909, pp. 721-26; 1910, pp. 460-64 ; Tilak, The Orion ; The Arctic home in the Vedas.
upon two wholly improbable assumptions, first, that the hymns really assert that the year began at the summer solstice, and, second, that the sun was then brought into any connection at all with the Nakṣatras for which there is no evidence whatever. The Nakṣatras are, as their name indicates and as all the evidence of the later Saṃhitās shows, lunar mansions pure and simple". And on these grounds, Jacobi’s findings have been considered as improbable and, consequentely, rejected. If, however, Jacobi’s above statement is taken as correct, and is further examined with reference to the positions as on 1st January, 1976, it is found that when the sun was at ‘Uttar Phālgun’, i.e. β Leonis, whose tropical longitude on the 1st January, 1976 was 171° 17’ 2°.8, the four cardinal points were as under:

<table>
<thead>
<tr>
<th>Cardinal points</th>
<th>Tropical longitude</th>
<th>Near Star Group</th>
<th>Tropical longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vernal Equinox -</td>
<td>81° 17’ 2°.8</td>
<td>λ Orionis</td>
<td>83° 22’ 16°.8</td>
</tr>
<tr>
<td>Summer Solstice-</td>
<td>171° 17’ 2°.8</td>
<td>β Leonis</td>
<td>171° 17’ 2°.8</td>
</tr>
<tr>
<td>Autumnal Equinox-</td>
<td>261° 17’ 2°.8</td>
<td>λ Scorpii</td>
<td>264° 15’ 0°.8</td>
</tr>
<tr>
<td>Winter Solstice-</td>
<td>351° 17’ 2°.8</td>
<td>α Pegasii</td>
<td>353° 9’ 3°.8</td>
</tr>
</tbody>
</table>

Thus, the Vernal Equinox was near the Star group λ Orionis or Mr̥gsirās whose tropical celestial longitude on 1st January, 1976, was 83° 22’ 16°.8 and the time elapsed since the period referred to by Jacobi to 1976 is about 6000 years, or, in other words, the epoch was at about 4000 B.C. This time period is the same as that obtained with reference to the time of heliacal rising of the star group ‘Aśvins’ or

9. ibid, p. 99;
Ariëtis with the advent of the spring season. It is well known that the season of spring played an important role in connection with the sacrificial cult of Vedic India. Whether the sun in vernal equinox was the beginning of the sacrificial year or not is controversial but, that at one time *Uttarāyana* or the winter solstice was considered as the beginning of the year is a certainty. The circumstances leading to the change over of the beginning of the year, consequently, the sacrificial year, from the vernal equinox to the winter solstice, if it at all happened, is not known, but presumably the shifting from the winter solstice to the beginning of the spring full moon was on account of meteorological considerations. The beginning of the year at the winter solstice has been described as 'distressed' part of the year. It was ordained by sacrificial law that those who commence their sacrifice on the *Ekāstakā* day, i.e., the 8th day of Magha, do it at the beginning of the year, but this day falls on the 'distressed' (*āvat* ārta) period of the year. Shabara and other commentators are of the opinion that people are likely to be distressed by cold at this time of the year. Hence, to take the sacrificial bath and to prepare for the sacrificial rites with their diverse paraphernalia became too difficult at the Kurukṣṭhestra latitude at Punjab. Also the middle of the year at the summer solstice fell during the rainy season which rendered the half-year ending sacrificial preparations extremely difficult. Therefore, the beginning of the year was

10. The Orion, Tilak; Tilak was opinion that at one time vernal equinox was the beginning of the sacrificial year.

11. Shabara on Jaim: vi. 5. 37:

\[ \text{(Ārtā—yasminkāle bhavanti sa ārtah kālaḥ śītena ca ārtā bhavanti).} \]

Sayana:

\[ \text{(Ārtambhīvināsamabhilakṣya dīkṣyante.)} \]
changed from the winter solstice to the Chitrā full moon and this course ‘was open to no objection’ whatsoever. Then again, the beginning of the sacrificial year was changed to Phalgṇṇī full moon with the change of the spring season due to solstitial shifting. Consequently, the advent of the spring season had to be watched with due care so that the sacrifice could begin at the proper season.

That the spring season or ‘vasanta’ was taken as the beginning of the year is amply justified by various references in the Vedic literature. In ancient times sacrifice and the year were also considered as synonymous terms as throughout the year sacrificial rites continued to be performed and the various rites probably formed the basis of the Vedic calendar. Thus to observe these rites in their proper sequence, the period when

12. Sayana’s commentary on Taitt. Sam. vii. 4.8

While commenting on फल्गुनीपूर्णमास (phalgunīpūrṇamāsaya) he states तत्त्व च भविसंवत्सरोपकरणमित्वात् | एवतेवाभिप्रेत्याधान-ब्राह्मणे समाम्नातमु | उत्तरयोगरथोल | एव वै प्रथमा रात्रिः संवत्सरस्या यहृतं फल्गुनोति | (Tatsya ca bhavisamvatsaro-pakramadinatvā | Etadevābhipretyādhanbrahmaṃ samamānam uttarayoradadhita | Eṣā vai prathamā ratriḥ samvatsarasya yaduttare phalgṇṇiti)

while on सित्रापूर्णमास (Citṛāpūrṇmāsa) he observes सोपि वसंततु मध्यपालितवत्समवत्सरस्य मुखेवेः | (Soūpi vasaṃtatu-r-madhyapālitvāt samvatsarasasya mukhameva)

13. Ait. Br. i. 17 says:

संवत्सर: प्रजापति: | (Samvatsaraḥ Prajāpatiḥ) | प्रजापति यज्ञ: |
Prajāpatiyaṣṭiḥ
Taitt. Sam, ii. 5.7.3 & vii. 5.7.4

यज्ञे वै प्रजापति: | (Yajño vai Prajāpatiḥ)
Taitt. Sam, vii. 2.10.3

संवत्सर: प्रजापति: | (Samvatsaraḥ Prajāpatiḥ)
also Taitt. Br. i. 2.6.

मुख वा एतद्वृत्ताः यदसः: | (Mukham vā etadrṭunāṃ yadvasomtaḥ)
the year should begin had to be ascertained correctly and adjusted so that the middle of the year, consequently, the middle of the sacrifice fell on the 'visuvan' day, i.e., either at the solstitial or the equinoctial day, or very near. That the year, or the sacrificial year began from the spring season at Phalguni Full Moon can also be surmised from various later references in the Brähmapanas and from the sequence of the months of the later Vedic period in which it was ordained that the year begins with the spring season. Many other references in the Vedic literature also confirm this. Certain Rig Vedic references lend support to the view that the heliacal rising of the 'Aśvins' or the star group Arietis was connected with the advent of the spring. Prof: Max Mueller has, however, taken the Aśvins to be mixed up with the 'daily adventures of the Sun and the Dawn' and has further stated that

14. Vishuvan actually means the vernal or Aut. Equinox but generally, middle of sacrificial year was commonly known as the visuvan.

15. Taitt. Br. i. 1.2.1—

मुख वा एतन्तक्षत्राणम् | यत्कृतिकाः | (Mnkham vā etanna-kṣatraṇam yatkṛttikāḥ) | and also Taitt. Br. i. 1.3 6—

मुख वा एतद्दुना यद्दस्त: | (Mukham va etadṛtuṇam yadvastah) |

Sat. Br. vi 2.2.8:

एषा ह संवत्सरस्य प्रथमा राशियंतुभासुल्गुणेषु पौर्णामाशी | (Eṣā ha saṃvatsarasya prathamā ratri-r-yatphalguniḥ paurnamāsi) | Taitt. Br. i. 1.2.8 :

एषा वै प्रथमा राशि: सवत्सर्स्य यदुनरे फलगृही | (Eṣā vai prathamā rātriḥ saṃvatsarasasya yaduttare phalguni) | मुख एव संवत्सरस्याधिमाधयां वसीयान्त्व शाब्दिक | (Mukhata eva saṃvatsarasyāgniṃadhiḥa vasīyānaḥ śabdiḥ) | Sankhkhuyana Br. iv. 4

मुख वा एतत्संवत्सरस्यवल्गुणी पोषणाभालो | (Mukhāṃ vā etātstāsaṃvatsarasayatphalguni paurnamasi).

‘the Dawn is born when the Aśvins have harnessed their chariots’\(^{17}\) while Macdonell considers that ‘they are more closely associated with honey (मधु, Madhu) than any of the other gods’\(^{18}\) and their ‘car is honey bearing’\(^{19}\).

Prof P. C. Sengupta of the Calcutta University has interpreted the word मधु विद्या (madhu vidyā) as the science of spring, i.e., the indication of the advent of the spring\(^{20}\). It may be objected that ‘madhu vidyā’ may not be interpreted as the ‘science of spring’, but since ‘madhu’ and ‘mādhava’ comprised the months of spring\(^{21}\) of the Vedic tropical year, this objection is not tenable. Further the following Rig-Vedic hymn is well known to all Indians as this is read on all auspicious occasions\(^{22}\):

\[
\begin{align*}
\text{मधुबात्रापुलस्य} & \text{ ज्ञाताये मधुशरस्य सिम्बवः} & \text{मध्वोवेः सस्तोवश्रोः} & || \\
\text{मधुनक्तमुतोपसो मधुमत् पाणिवर रजः} & \| & \text{मधुद्योरस्तुनः पिता} & || \\
\text{मधुमानो वनस्पतिमृगशङ्ग अस्तु सूर्यः} & || & \text{माधीगानो भवत्तु न} & || \\
\text{Madhuvātā तिर्याये madhukṣaranti sindavaḥ} & \| & \text{Madvīnah Santvoṣadhiḥ} & || \\
\text{Madhunaktamutośasī Madhumāṭ pārthivam rāiaḥ} & || & \text{Madhdaurastu naḥpitā} & || \\
\text{Madhumāṇno vanaspatiḥ inadhumām astu sūryaḥ} & || \\
\text{Madhīravīvo bhavantu naḥ} & ||
\end{align*}
\]

The hymn indicates: “The winds waft sweets, the rivers pour sweets for the man who keeps the Law: So may the plants be sweet for us. Sweet be the night and sweet the dawns, sweet the terrestrial atmosphere; Sweet be our father heaven to us;

\[\text{17. ibid, R.V. X. 39.12.} \]
\[\text{18. A Vedic Reader for Students, Macdonell, p. 128.} \]
\[\text{19. ibid, p. 129.} \]
\[\text{20. Ancient Indian Chronology, P. C. Sengupta, p. 60.} \]
\[\text{21. Taittiriya Samhita, 4.4.11.} \]
\[\text{22. R.V. 1.90.6-8; Griffith’s translation.} \]
May the tall tree be full of sweets for us, and full of sweets the sun: May our milch kine be sweet for us”3. And this cannot mean anything but the sweetness of nature attributable to the spring season.

Further, in Brhd Aranyaka Upanishada8, all the further elements bringing sweetness have been emphasised. All these qualities are, however, indicative of the spring season and, therefore, these hymns of the Rig Veda and the statements in the Upanishadas suggest that ‘madhu vidya’ or the ‘science of spring’ is nothing but, ‘the celestial signal of the advent of the spring season’ and, as it will be seen, these are connected with the ‘Aśvins’. Macdonell concludes that the ‘Aśvins are typically succouring divinities’, ‘they are characteristically divine physicians’, ‘healing diseases with their remedies, restore sight, cure the sick and the maimed’4. In case, the ‘Aśvins’ are identified with the Sun and the Dawn, as has been done by Prof: Max Mueller, the above qualities cannot be attributed to them. But, if they are identified with the advent of spring or rather the spring season, the reference to ‘madhu’ in the Rig-Vedic hymns quoted above and their healing and other beneficial qualities are confirmed. As particularly, after a severe winter in the Punjab and further north-west, the advent of spring is always welcome; then the old are cured of their diverse ailments and the young are healthy and happy. Taking the above into account, therefore, it seems apt to identify the rising of the ‘Aśvins’ with the advent of the ‘spring’ than simply with the ‘Sun and the Dawn’.

The ‘Aśvins’ are generally referred to in ‘dual number’ in the Vedic literature. This is possibly because the composers of the hymns identified them with the stars α and β Arietis, the prominent stars of the Nakṣattra group Aświni. The presiding deity of the ‘Aświnis’ are still considered to be the ‘Aśvins’. The three stars of this group α, β and γ Arietis, i.e., the ‘Aśvins’, are found to form a constellation which is likened

23. Brhd. Ar. 11.5.1-14
to the 'head of a horse'\textsuperscript{25}. In the various hymns of the Rig Vedas, the \textit{Aśvins} are spoken of many times as riding in the heavens in their 'triangular', 'three wheeled', 'honey bearing' chariot. Some of the hymns appended below will elucidate the statement:\textsuperscript{26}

\begin{quote}
\textit{
\begin{align*}
\text{धन: पञ्चनो मधुवाहने रघो सोमस्व वेनामुविष्म हि द्वृ \ (विषु)
\end{align*}
}
\end{quote}

"Three are the fellies in your honey bearing car, that travels after Soma's loved one as all know". Griffith here has translated 'madhu vāhane' as honey bearing, but this adjective is only applied to the car of the 'Aśvins', and 'to the car of no other god in the Rig Veda'. In the next portion of the hymn the composer states that 'three are the pillars set upon it for support'.

Another hymn\textsuperscript{27}, describes the car of the 'Aśvins'

\begin{quote}
\textit{
\begin{align*}
\text{व्या त्रिक्रक्रा त्रिवशो रथस्य क्षं घोरो बन्धरो ये सनीला: }
\end{align*}
}
\end{quote}

"Where are the three wheels of your triple chariot, where are the three seats firmly fastened ?" (Griffith) but Wilson translates: "Where Nasatyas, are the three wheels of your triangular car? Where the three fastenings and props (of the awning)?". In another hymn\textsuperscript{28}, according to Wilson, the composer invites the 'Aśvins' to come in their 'three columned triangular car', but Griffith translates: "Come, 0 ye Aśvins, mounted on your triple car, three seated, beautiful of form".

\begin{quote}
\textit{
\begin{align*}
\text{त्रिवन्दुरण विवसूर सुपेशसः रथेनायतातामिविनाः}
\end{align*}
}
\end{quote}

That the car of the \textit{Aśvins}, in addition to being 'tri-columnar',

\begin{flushright}
26. RV. M.1.34.2
27. RV. M.1.34.9
28. RV. M.1.47.2
\end{flushright}
three wheeled’ and ‘triangular’ was ‘well constructed’ is evident from another hymn 29:

\[ \text{Trivandhureṇa trīvṛtā rathena tricakreṇa} \]

\[ \text{suvṛtayātamarvāk} \]

Wilson translates: “Come to us with your tri-columnar, triangular, three wheeled and well constructed car”.

Further qualities of this car of the ‘\text{Aśvins’} are described in a hymn 30, wherein the composer states:

\[ \text{Arvāṅg trirakro madhuvāhano ratho jirāsvo Aśvinoryātu} \]

\[ \text{sūṣṭutah} \]

\[ \text{Trivaandhuro maghavā viśvasaubhaḥ śaṁ na ābakṣad} \]

\[ \text{dripade catuṣpade} \]

Griffith translates: “Nigh to us come the \text{Aśvins’} lauded three wheeled car, the car laden with meath and drawn by fleet footed steeds, Three seated, opulent, bestowing all delight: may it bring weal to us, to cattle and to men”. Here also \text{madhuvāhano} (‘madhu vāhano’) has been translated as ‘laden with meath’, but from all the qualities of the car, it indicates ‘spring bearing’ chariot. Another hymn specifies that the car of the \text{Aśvins} is ‘harnessed at dawn’ and ‘set in motion at dawn’ 31.

\[ \text{Prataryujam nāsātyadhitistathaḥ prataryavānam} \]

\[ \text{madhuvāhanam ratham} \]

“Ye, O Nasatyas, mount that early harnessed car, that travels early, laden with its freight of balm”.

29. RV. M.1.118.2
30. RV. M.1.157.3
31. RV. M.X.41.2
All the above references describe the appearance, nature and qualities of the Aśvins’ car. From the foregoing, it is seen that the Aśvins had three wheeled (त्रिक्रो tricakro), ‘madhu vāhanam’ or ‘madhu vāhana’ (मधुवाहन Or मधुवाहनो), i.e., ‘spring bearing’ chariot. If the word ‘madhu bāhanam’ is taken to mean ‘laden with honey’, certain anomalies arise. Notwithstanding the derivative meaning of the word ‘मधु’ as honey, why should the car of the ‘Aśvins’, which has so many qualities would have to bring honey to the Vedic composers of the hymns when this object, as can be easily surmised, was available in quantities here itself? Not only that, but the adjective of the car is ‘madhu vāhane’, i.e., bearing or carrying ‘madhu’ or ‘honey’. Therefore, taking into account the later version of the month of the ‘spring’ as ‘madhu’, it seems justified that the word ‘madhu vāhanam’ should be interpreted as ‘spring bearing’ and not ‘honey bearing, or ‘laden with meath’. Further, this car or the Aśvins was drawn by ‘swift horses’, had ‘three canopies’, ‘filled with treasure’, auspicious and brought prosperity to the people and to the cattle’. And this spring bearing chariot of the Aśvins was ‘harnessed at dawn’ and ‘set in motion at dawn’ and was ‘well constructed’, ‘tri-columnar’, triangular and had ‘three wheels’. All these references are reminiscent of the α, β and η Arietis, which form the Nakṣattra group Aświni and as already stated, these are ‘likened to the head of a horse’.

32. Sakalya Samhita, 11.162 (Anc. Ind. Cr. p. 62)

Reference to the head of a horse is also found in Brihad Devata iii, 16-23; the story of Dadhyanc in quoted in Nitimanjari on RV, 1.116.12; Wilson in his note on RV, 1.84.13 states ‘Indra having taught the sciences called Pravargyavidya and Madhuvidya to Dadhyanch, threatened that he would cut off his head if ever he taught them to any one else. The Asvins prevailed upon him to teach them the prohibited knowledge, and to evade Indra’s threat, took off the head of the sage, replacing it by that of a horse.’
Whether or not the star \( \alpha \) Triangulum was included in this group to form a 'broad' and a 'solid' triangle is conjectural, but in reality the stars \( \alpha, \beta \) and \( \lambda \) Arietis also form a 'tri-columnar' 'triangle' having 'three wheels'. These might have been observed in the heavens by the Vedic composers and referred to in their hymns; and since this car was like the group of stars 'Aśvins' and was 'madhu' or 'spring' bearing, it indicated the advent of the spring, when the entire nature turned sweet as honey or 'madhu'. Therefore, this car of the Aśvins' was, naturally, not honey bearing but 'spring' bearing. The figures of the Aśvins' three wheeled chariot including and excluding the star \( \alpha \) Triangulum are shown below for comparison:

\[\text{Aśvins' Car with Triangulum.}\]

\[\text{Aśvins' Car without Triangulum.}\]

Notwithstanding diverse interpretations of the word 'madhu vāhanam', the car of the Aśvins, which was har-
nessed and set in motion at dawn was 'spring bearing' or in other words the 'harbinger of the spring'; and since this car was harnessed at dawn, it indicates that it appeared at dawn with the advent of the spring season and also the same car was set in motion at dawn, meaning that it moved in horizon with the advent of the dawn. This leads to the conjecture that the car of the 'Āśvins' was composed of the constellation 'Āświni' comprising of the stars α, β and γ Arieties. And since these stars or rather the star α Arietis, the prominent star of this group, when became first visible at dawn, the season of spring came into being at the place of observation where the hymns were composed. This for obvious reasons, as explained later, may be taken to be that of Kurukṣhetra latitude in the Punjab.

Several Rig Vedic hymns assert that Āśvins rose first and then came the dawn and then rose the Sun88. Wilson infers from this that the 'Āśvins' were the 'precursors of the dawn, at which season they ought to be worshipped with libation of soma juice84. From the above it can not but be assumed that at the time when the Āśvins rose before the dawn and the sun, it was spring season at the place of the observer or in other words the heliacal rising of the 'Āśvins' indicated the advent of the spring season at the place of observation. This was, therefore, the jealously guarded secret of the 'madhu vidyā' told to Dadhyāṇe, the son of Atharvan, by Indra and was nothing but the 'science of spring' at the time of the heliacal rising of the stars α, β, γ Arieties. Since α

33. RV. 1/7/4/10:

युवोर्हि pūrbbam savitoṣaso rathāṁ ṛtaya cīṁ ghṛtvantamisyati | (Yuvorhi pūrbbam savitoṣaso rathāṁ ṛtaya cīṁ ghṛtvantamisyati )

before the dawn even, Savitri sends to brings you to the rite, your wonderfull car shining with clarified butter.

RV. 111.5.5.1

उषय: द्वितो मै अविनाभजी: | (Ūṣakyāḥ stomo Aśvināvajīgaḥ)

'the praiser awakes to glorify the Asvins before the dawn'. Also other references : RV. 1.5.5.; 1.6.7.; 1 9.31.4.; etc.

34. Anc. Ind. Chr., Sengupta, p. 64.
Arietis rises last, with the rising of the star, the Aśvins rose in the horizon completely. The dawn begins when the sun is 18° below the horizon. When the star Arietis rose before the dawn, it may be properly assumed that the Sun was 18° below the star or the star was 18° ahead of the Sun; and then was the beginning of the spring season at the latitude of Kurukṣetra, which is 30° N.

Thus, from the above data the following conclusions can be drawn:

i) that the star Arietis, the largest star of the group, rose in the east just prior to dawn, and then rose the Sun,

ii) that this indicated the heliacal rising of the star Arietis, and hence, the Sun was 18° or so behind the star, and

iii) that the spring season began with this phenomenon at the latitude of the observer, which is taken to be that of Kurukṣetra, i.e. 30° N.

Without going into complicated mathematical details, the above data may be examined to find out the total shifting of the equinoctial point up to the present time. The tropical longitude of the star Arietis was 37° 19’ 35”.8 on the 1st January, 1976. Other factors have been taken to remain as constant. At a rough estimation the Sun’s tropical longitude must be somewhere near 55° 19’ 35”.8, i.e., 18° below the star at the time of its probable heliacal rising in the year 1976 and also for the advent of the spring season at the time according to the position of 1.1.76. Indian spring begins when the Sun is at the tropical longitude of 330° at a place in Punjab where the latitude is the same as that of Kurukṣetra. Hence, according to the above figures, the total shifting of the equinoctial point, till the end of 1975, works out to about 85° 19’ 35”.8 (55° 19’ 35”.8 plus 360° minus 330°) which represents a lapse of about 6120 years at 72 years for each degree of shifting and the period comes to about 4100 B.C. Prof. P. C. Sengupta has found the period, after detailed calculation, to be at 4000 B.C. (calculations at Annexure A) 33.

Accepting the above premises regarding the time factor of the Vedic antiquity to be correct, it appears, that at the time when the Ṛṣivins heliacally rose in the east the position of Vernal Equinox was at $85^\circ 19' 35''.8$ (i.e., the position of the Sun at spring $= 55^\circ 19' 35''.8$ plus $30^\circ$) according to the position of 1976. Taking this into consideration, the four Cardinal points would be as under:

<table>
<thead>
<tr>
<th>Cardinal points (Approximate position)</th>
<th>1976 Longitude as obtained from the above data</th>
<th>Near Star group</th>
<th>1976 Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vernal Equinox</td>
<td>$85^\circ 19' 35''.8$ λ Orionis or Μξισίρας</td>
<td></td>
<td>$83^\circ 22' 16''.8$</td>
</tr>
<tr>
<td>Summer Solstice</td>
<td>$175^\circ 19' 35''.8$ β Leonis or Ψελάγκυν</td>
<td></td>
<td>$171^\circ 17' 2''.8$</td>
</tr>
<tr>
<td>Autumnal Equinox</td>
<td>$265^\circ 19' 35''.8$ λ Scorpii or Μύλα</td>
<td></td>
<td>$264^\circ 15' 0''.8$</td>
</tr>
<tr>
<td>Winter Solstice</td>
<td>$355^\circ 19' 35''.8$ α Pegasi or Βάπράπαδα</td>
<td></td>
<td>$353^\circ 9' 3''.8$</td>
</tr>
</tbody>
</table>

The above reveals that the various positions of the stars and the cardinal points were almost similar to those obtained by Jacobi from different data. This lends support to his findings that the Sun was in conjunction with the lunar mansion Phālguni at Summer solstice and that the epoch took place at about 4000 B.C.

In the course of examination of some Vedic hymns it is observed that in the Vedic literature 'Indra' has been described as the lord of the rains, wielder of thunderbolts and killer of Vritra or Ahi. In some Rig Vedic hymns, his earlier famous performances have been detailed. Wilson and Griffith translate these as under:
RV. M. 1.32.1:

Indrasya nandīrini pravṛttaṁ gānaṁ chakāra pravṛttaṁ bṛjī
dharmam aprataṁ pravṛttaṁ abhinatam pṛvaṁtanam.

I declare the former valorous deeds of Indra, which the Thunderer has achieved; he clove the cloud; he cast the waters down (to earth) he broke (a way) for the torrents of the mountain’ (Wilson)

RV. M. 1.32.2:

ahannhīṁ pravate śiśriyāṇaṁ tvaśtāsmai
vajraṁ svaryyaṁ tatakṣa

Vāśrājiva dhenavaḥ syandamānāsāṁjña
samudramavajgamurāpaḥ.

‘He slew the Dragon lying on the mountain; his heavenly bolt of thunder Tvashtar fashioned. Like lowing kine in rapid flow descending the waters glided downward to the ocean’ (Griffith)

RV. M. 1.32.3:

Vṛṣṭayamaṇo vṛṇita somāṁ trikṛdrūkṣavapitaṁ sutasya
Āsaya kam maghavādattavajramahannenaṁ
prathamajāmahīnaṁ.

‘..........Maghavan grasped the thunder for his weapon, and smote to death this firstborn of the dragons’ (Griffith)

RV. M. 1.32.8:

Nandī n bhinnamayī shayānā māneśuḥ abhinnyaṁ.

Vāścindvṛtro mahnā paryatiṣṭhathāśāmahī
apatsutaḥ śirabhuva.
'There as he like a bank-bursting river, the waters taking courage flow above him. The Dragon lies beneath the feet of torrents which Vṛtra with his greatness had encompassed'.

(Griffith)

RV. M.1.32.12:
अश्योवारोः अभयस्तदिना सूक्ष्मस्ति प्रत्यं हँ देव एकः ।
अजयोगास अजयः चुरसोभमब्रासुः सतेवे सप्तसिरद्वूः ॥
Ashyovars abhavastadindra spkeyatva pratyaham deva ekaḥ ।
Ajayaogās ajayaḥ surasomavāsrjaḥ sartave saptasindhunga ॥

'When the single resplendent Vṛtra returned the blow (which had been inflicted), Indra, by the thunder-bolt, thou becomest (furious) like a horse’s tail. Thou hast rescued the kine: thou hast won, Hero, the somajuice; thou hast let loose the seven rivers to flow' (Wilson).

Most Vedic scholars agree that Vṛtra has been taken to mean the cloud, and these clouds are represented as demons. They are unwilling to shed the rains and bring prosperity to the people. Therefore, they had to be killed, in due time by the thunderbolt of Indra, so that they may part with their watery stores to enable the Vedic Indians to cultivate and produce crops. Wilson explains the fight between Indra and Vṛtra or Ahi as that ‘the cloud, personified as a demon named Ahi or Vṛtra, is represented as combating Indra with all the attributes of a personal enemy, and as suffering in the battle mutilation, wounds and death’34. He further states that ‘Vṛtra, sometimes also named Ahi, is nothing more than the accumulation of vapour, condensed or figuratively shut up in, or obstructed by, a cloud. Indra, with his thunderbolt, or atmospheric or electrical influence, divides the aggregated mass, and vent is given to the rain which then descends upon the earth’35. Since Indian monsoon starts with the summer solstice and since Indra fought with

34. Wilson's introduction to his Rig Vedas.
35. Willson in Griffiths, F. N. under RV. 1.32.
the demon Ahi or Vṛtra to bring monsoon, he becomes the
god of summer solstice, or at least in this particular case
he is attributed with the qualities. Thus, his fight with
Vṛtra or the monsoon clouds is an annual affair at the
summer solstice.

Another hymn in the Rig Veda\(^{36}\), specifies how
Indra became the possessor of ‘Maghā’ and thereby the
killer of Vṛtra. The word ‘Maghavā’ (मघवा) indicates ‘one
who possesses Magha’ and the word ‘Maghā’ means the con-
stellation ‘Maghās’ consisting of the stars of the Leonis
group. Another important deed of Indra was that “Indra
hath raised the Sun on high in heaven, that he may see
afar: He burst the mountains for the kine” (Griffith)
इम्बो वीर्याय चक्रसेव आसुव्यं रोहयद्रिति (Indo dirghāhya cakṣase
āśtryyaya rohayaddhīvi)\(^{37}\). Thus, Indra kills Vṛtra and brings
rain. Indra, by the possessions of the ‘Maghās’ or the star
group Leonis becomes ‘Maghavan’ and by this act ‘hath
raised the Sun on high in heaven’. Therefore, at the period
when the hymns were composed, summer solstice began
with the heliacal rising of the star group Maghā or the Leonis.
As such, it can be inferred that when α Leonis, the most
prominent star of this group, became first visible in the
east at dawn, the Sun reached Indra’s place at the summer
solstice. The interpretation of the word ‘Maghā’ is con-
troversial. Prof Sengupta states that that if Indra is a
‘personification of a phenomenon of the firmament, and the
and the word ‘Vṛtra’ or cloud is another phenomenon of
the firmament, the word ‘Maghā’ must also mean another
phenomenon of the same firmament, viz, the constellation
‘Maghās’\(^{38}\). If, however, Maghā is interpreted to mean wealth,
as has been done by some, it may be contended that ‘its acquisi-

\(^{36}\) RV. X. 23.2 :

“इन्द्रो मध्यमथवा वृत्रहात्मुशत”

“Indro maghairmaghavā vṛtrahātibhuvat.”

\(^{37}\) RV. M. 1.7.3.

\(^{38}\) Anc. Ind. Chr, Sengupta, p. 76.
tion can not possibly increase the fighting capability of this Indra. Besides, at many places in the Sanskrit literature, the word 'Magha' has been used to mean 'Magha', the tenth lunar constellation counting from the Aśvins.

From the above, two aspects come into the fore: first, that the Sun was in conjunction with the Maghās at the time of the summer solstice and, second, the Maghās heliacally rose at the time of the summer solstice. As the first 'is taken to mean the conjunction of the Sun with the Maghās and the summer solstice, the date for this event comes to about 2350 B.C. The composer of the hymn X 23.2 is Rishi Vimadā who was reputed to be the son of Indra or Prajapati and was much anterior in date to that of the Pāndavas who flourished at the junction of the Dwāpara and the Kali era. His statement that Indra became 'नरेभिमव्या' (Maghai-r-Maghavā) can not, therefore, mean the conjunction of the Sun with the Maghās if the period of the Pandavas is taken to be earlier. Thus, taking the time of the hymns composed before the Pandavas, the summer solstice occurred with the heliacal rising of the star α Leonis, which is the most prominent star of this group.

In considering the above, it is found that the tropical longitude of the star α Leonis on 1.1.76 at 10.8 hrs. I.S.T. was 149° 29' 42". 840. Therefore, at the time of its heliacal rising the tropical longitude of the Sun was 167° 29' 42". 8, of the time in review in 1976. It was then summer solstice. Taking the Indian summer solstice to occur at that period when the Sun was at the tropical longitude of 90° the total shifting at a rough calculation has been 77° 29' 42". 8, representing a lapse of about 5600 years and bring the period to about 3624 B.C.; but from actual calculation, Prof: Sengupta has found the date to be at about 4170 B.C. (Annexure B), and if the Sun's depression is taken to be 17° below the horizon, the date comes to 4000 B.C.

39. ibid, p. 76.
40. Lahiri's Indian Ephimeries; 1976, p. 41.
Taking into account Prof. Sengupta’s calculation, one finds that here also the Vernal Equinox was near the star \( \lambda \) Orionis or \( M\)rgsiras, Summer solstice near \( \beta \) Leonies or Uttar Phālguni, Autumnal Equinox near \( \lambda \) Scorpii or Mula, and Winter Solstice near \( \alpha \) Pegasi or Purva Vādrapada. Thus, from all the factors considered above, it is found that at about the period the Vernal Equinox was in \( M\)rgsiras, which is also the findings of Tilak, Jacobi and Sengupta. This is sufficient proof to indicate that the Indian culture was quite mature at that remote date and the people were quite capable of observing the Astronomical phenomenon of the heliacal rising of the Asvins or the Maghās at different time and space.

Two related matters need elucidation at this stage. These are, first, why Kurukṣetra latitude has been adopted for Astronomical calculation, and, second, whether the Vedic Indians were capable enough to observe the heavens and record the rising and the setting of any particular star or any star group.

As regards the first, a verse in the Satapatha Brāhmaṇa states that “the gods Agni, Indra, Soma, Makha, Vishṇu and the Viswadevas, except the two Asvins performed a sacrificial session. Their place of divine worship was Kurukṣetra. Therefore, people say that Kurukṣetra is the gods’ place of divine worship”\(^{41}\).

\[ \text{Devā ha vai satram niśeduḥ, Agnirindra somo mako Vishṇuḥ visvedevā anyatarivāśvibhyām ! Teśām kurukṣetraṃ devayajanaṃaśa ! Tasmādāhuḥ kurukṣetraṃ devānāṃ devajanaṃmiti tasmādyadatra kva ca kurukṣetrasya nigacchati tadeśāṃ yataḥ devayajanaṃ iti tadhi devānāṃ devajanaṃ.} \]

Again, in another verse, a similar statement\(^{43}\) that ‘those gods are performing the sacrifice at kurukṣetra, is noticed.

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41. Sat. Br. XIV. 1; Eggeling’s translation;
In the Maitrāyāni Sanhitā it is recorded that "the gods performed sacrifice at Kurukṣetra".48

Thus, all through, Kurukṣetra was the centre of Vedic culture, and, consequently, justifies acceptance of this latitude for the calculation of the Vedic antiquity.

Further, from the fact that the Vedic Indians raised up Indra, the god of summer solstice or in other words the rain producing deity, at a bamboo pole45, Prof. Sengupta concludes that the Vedic Indians could not have lived much further north than about 26° N.46 There is also another statement in the Rig Veda47, to the effect that the planet 'Jupiter being first born in the highest heaven of supreme light'. Jupiter could not have a celestial latitude exceeding about 1° 45'; hence its greatest north
declination could not exceed 26° and if at the land of the Vedic Indians, this planet was discovered in the high heaven, the latitude of the place could not exceed 30°N. Since, Kurukṣetra is placed at the same or nearly the same latitude, acceptance of this latitude for the place of observation of the Vedic Indians seems to be justified. As regards the second point, that is, whether the Vedic Indians of that antiquity could observe the positions of the stars in the heaven, a statement of the Taittariya Brāhmaṇa speaks for itself. Another statement of the same Brāhmaṇa speaks of Kṛttikās as the mouth of the Nakṣatraṇa and that the Nakṣatras are the house of gods. This leads to the conclusion that “the early observers of heavens, whose only method of determining the position of the Sun in the ecliptic was to observe every morning the fixed stars nearest that luminary.” And according to this “the year would naturally be said to be complete when the sun returned to the same fixed star.”

Prof. Whitney states that the same system was followed at the time of the Surya Siddhanta. He has explained that “it is, however, not the tropical solar

48. Anc Ind. Chr.; p. 71;
49. Taitt. Br. i. 5.2.1:

यत्सुग्ध्यं नक्षत्रं तद्वकृष्णतिपप्युष्म। यदा वै यूर्यं उत्तेषि। अभ नक्षत्रम्

नैति... (Yatpurṇyaṃ nakṣatraṃ tadṛdakuvitopabyusar yadā vai sūrya udeṣi | Atha nakṣtraṃ naiti)...

ibid.; i. 5.2.2

या वै नक्ष्ट्रों प्रजयति वेद। (Yā vai nakṣatriyam prajapatim veda)।

ibid.; i. 5.2.7.

मुखं वा एतन्तत्त्वाक्षम्। यत्कृतिका: (Mukham vā etanṃnakṣatrāṇam | Yaṭkṛttikāḥ |)

देवग्रहं वै नक्ष्त्रासिनं...कृतिका: प्रथमं... (Devagrha vai nakṣatrāṇi... Kṛttikāḥ prathamam...)

51. The Orion, Tilak, p. 18.
year which we employ, but the sidereal no account being made of the precession of the equinoxes. Garga informs us that when the sun turns north without reaching Dhanista, it is the indication of great calamity.

From all the above references, it appears that the Vedic Indians were quite capable of observing the star that rises in the east and hence, undoubtedly the observers could find out the heliacal rising of the stars θ Arietis and θ Leonis with the advent of the spring and the rainy season, which happened at about 4000 B.C. or thereabouts. Therefore, the theory that the vedic Indians entered India at about 1500 B.C. is not only not tenable but quite unacceptable.

52. Surya Sid ; Whitney, i. 13, note.
53. Garga quoted by Bhattotpala in Brihat Samhita, iii. 1. :
   यदा निवर्ततेःप्राप्तः भविष्यमुत्तरायणे ।
   अश्लेषा दक्षिणप्राप्त स्तवं विद्यामोहाभयम् ॥
   Yadā nivartateśtāprāptḥ Śravistamuttarāyane ।
   Āsleṣāṃ dakṣiṇeśtāprāptastadā vidyāṁmohābhayaṃ ॥
CHAPTER III

ANTIQUITY OF THE MAHABHARATA AND LATER INTERPOLATIONS.

Most Western scholars of the nineteenth century were inclined to assign the date of the *Mahābhārata* recension to a less remote period than what is accepted by the scholars of the east. Prof: Weber, in his History of Sanskrit Literature, states that ‘since Megasthenes says nothing of this epic, it is not an improbable hypothesis that its origin is to be placed in the interval between his time and that of Chrysostom; for what ignorant sailors took note of would hardly have escaped his observation’¹. This statement of Prof: Weber seeks to assign the period of the *Māhābhārata* recension to a modern period, but this seems to be a misrepresentation of the actual facts, or rather, his logic is fallacious on a very important consideration. The fallacy in his logic is that, the original travelogue of Megasthenes is not available now. The modern compilation, which at present is known as the Megasthenes’ accounts of India, was made by Dr. Schwanbeck² from the quotations of Megasthenes obtained from the books of various Greek historians. No record of his original writings is available. Therefore, it cannot be stated with fairness that Megasthenes actually did not refer to the *Māhābhārata* or to any of the characters included therein. Considering these, Prof: Weber’s above statement is neither tenable nor acceptable.

Others also hold various views on the subject. One group asserts that although the *Mahābhārata* is a comparatively old compilation, its existence, at least its modern recension, cannot be dated back to any period anterior to 4th or 5th century B.C.; and before that there could have been no such compilation in existence; while another group

professes that the original version of the Mahābhārata might have been in existence, but this did not contain any reference to the Pāndavas or to Krīṣṇa. These, they say, are modern interpolations in the body of the existing Mahābhārata. Both these contentions seem to be incorrect. It can be proved from early Sanskrit literature and from early Sanskrit grammar that, 'Mahābhārata' existed prior to the above mentioned period and references to the Pāndavas and to Krīṣṇa date back to further antiquity.

Still another group, in fact, those who do not believe in the historicity of the Pāndavas and Krīṣṇa, hold the view that Kurukṣetra war was fought between the Kurus and the Pāṇcālaśas and not between the Kurus and the Pāndavas as obtaining in the Mahābhārata. Actually, however, the Pāṇchālas were the neighbours of the Kurus and in earlier times, both these clans were prosperous. Probably, at one time they lived together. In course of time they had separated and, as is common in the early period, engaged themselves in clannish feuds from time to time. Drupada, the king of the Pāṇchālas, had previously fought the Kurus many times when the Pāndava brothers sided with the Kuru clan. So far there is no controversy. The Pāṇchālas, however, joined the Pāndava side during the Kurukṣetra war through the medium and on account of the institution of marriage. The daughter of the Pāṇchāla king Drupada was married to the five Pāndava brothers, who actually belonged to the Kuru clan; the prince of the Pāṇchāla country Dhriṣṭadyumna, was instrumental in the death of Drona; and Śikhandi, another prince of the Pāṇchālas was responsible for the death of the great patriarch Bhīṣma. Since, in fact, the Pāndavas were another branch of the Kuru family, the Kurukṣetra war may rightly be termed as the war between the Kurus and the Pāṇḍavas backed by the Pāṇchālas. And, all the time, in this war the Pāṇchālas helped the Pāndavas for their victorious emergence and did not engage themselves to take revenge for their clannish enmity.
On a review of the various chieftains and the countries involved in the Kurukshetra war, it is seen that Duryadhona commanded the allegiance of eleven ‘aksauhini’ of soldiers out of eighteen, while the Pândavas had, on their side, only seven. These seven ‘aksauhinitis’ consisted of the five Pândava brothers with their several children, the Kekayas, the king of Kāshi, Dhristaketu of Chedi, Pravira of the Pândyas, and Virāta of the Matsya country. And above all, they had king Drupada of the Pāńchāla country, who himself and his sons fought valiantly for the Pândavas and ultimately fell at the battlefield. Among some of the other famous warriors, there were Chetikan and Sātyaki of the Brīshni tribe, Ghatotkacha, the Rākṣhasa hero, and Irīvan of the Naga tribe, a progeny of Arjuna and a Naga princess. On the Kurava side, however, almost the whole of ancient India was represented. They had on their side the kings of Magadha, Bulhika, Bhoja, Madra, Sindhu, Mahisvati, Avanti, Kośhala, Aṅga, Pruyagayotishapura, Kuliṅga, Trigartha, Sauvira, Gāndhari and many other hill and barbarian tribes including the Yavanas, Tusharas, Śukas, Nīśhādas and others. They also had on their side two famous warriors in Bhīṣma and Droṇa and also Aswathāma, while Krishṇa on the Pândava side was a non-combatant charioteer of Arjuna. Thus the feud or the war, was too elaborate an affair and represented almost the whole of India and cannot be described as a clannish feud between the Kurus and the Pāńchālas. Some are of opinion that the Pândavas did not exist or could not have existed and they have analysed the reasons. They have concluded that they did not exist from the fact that the name of the ‘Pândavas’ is not found in any contemporary literature. This reason is, however, far from convincing. In the Mahābhārata itself, the children of ‘Pāṇdu’ have been called the ‘Pándavas’ and they were the heroes of this early Purāṇa. With-

3. One ‘aksauhini’ of soldiers consist of: (i) infantry—1,09,350, (ii) cavalry—65,610, (iii) elephants—11,870 and (iv) chariots 21,870 plus 9,600 other personnel; this seems to be exaggerated in view of the time and period.
out them, there could have been no existence of the 'Mahābhārata'. Prof: Weber, however, states that in the Satapatha Brāhmana, the name 'Arjuna' is found, but there, the name has been used as synonymous with 'Indra' and does not refer to 'Arjuna', the third Pāṇḍava brother. Actually, in Satapatha Brahmana⁴, both the names 'Arjuna' and 'Phālguni' have been used. Just as 'Arjuna' may indicate both 'Indra' and 'Arjuna' the third Pāṇḍava brother, similarly, 'Phālguni' also indicates 'Indra' and 'Arjuna' the third Pāṇḍava brother. 'Indra' is called 'Phālguni' because he is the presiding deity of the star 'Phālguni', and 'Arjuna' is called 'Phālguni', as he was born under this star. Thus, both 'Indra' and 'Phālguni' are synonymous terms and may mean either. And this connection with the star 'Phālguni', whose presiding deity is 'Indra' might have given rise to the myth that 'Arjuna' was Indra’s son.

The Buddhist literature, however, mentions a hill tribe called the 'Pāṇḍavas'; these Pāṇḍavas were the enemies of the people of Kośāla and Ujjain, and further, they were reared in the Himalayas⁵. Pliny and Solinios are of opinion that a township north of Sogdiana, north-west of Balkh country⁶, was called 'Pāṇḍya'. Ptolemy considers that the 'Pāṇḍya' people lived near the river 'Bidaspes' or 'Vitasta'⁷, and Kātyāyana has derived 'Pāṇḍya' from 'Pāṇdu' in

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4. Satapatha Br. 2.1.2.11
6. 'Sarabo and Eratosthenes regarded the Indus as the western boundary of India, but Ptolemy extends it to the Hindukush and includes modern Afghanistan, Baluchistan and Kandahar within India. Sogdiana lay to the north of Bactria, and Sakai were located to the east of the Sogdians' (Ptolemy in Classical Accounts of India, Mazumdar, p. 371 and FN 46 at p. 380).
7. Ptolemy states that 'around the Bidaspes'; is 'the country of the Pandoouoi' and 'the reference to the country Pandoouoi indicates that a portion of the Punjab was still known as the Pandu contry, named after the Pandavas, and this name was transferred to the Pandya country in the south'—Ptolemy in Classical Accounts of India, ed. R.C. Mazumdar; p. 371 and FN. 46 at p. 380.
his commentary (Vārtika) of Pāṇini Sutras. Wilson thinks that the Pāṇḍya people were the original residents of Sogdiana and, in course of time, came to Hastināpur, and then again went south and established the Pāṇḍya kingdom. Talboys Wheeler states that ‘the adventures of the Pāṇḍavas in the jungle, and their encounters with Asuras and the Rākṣhasas are all palpable fictions, still they are valuable as traces which have been left in the minds of the people of the primitive wars of the Aryans against the aborigines’. All these, however, though interesting, confuse the issue. Therefore, to determine the antiquity of the Mahābhārata characters, only the references obtained in the early Indian literatures and early Indian grammars should be accepted.

Specific reference to the name ‘Mahābhārata’ is found in the ‘Āśvalayana Grihya Sutra’ wherein it has been stated ‘Sumantu, Jaimini, Vaiśampāyana, Paila, the Sutras, the Bhāsyays, the Bhārata, the Mahābhārata, the teachers of law ......’. Thus even before the Sutra era, which some scholars place before the Buddhist period, two religious works ‘Bhārata’ and ‘Mahābhārata’ were known to have been in existence. Therefore, whatever might be the period of the modern recension, two compilations known as ‘Bhārata’ and ‘Mahābhārata’ were in existence during the pre-Buddhist period. Further, Pāṇini the great grammarian in his Sutras states: महाभाष्य-परन्तु हृदयवाच्याजावल महाराष्ट्र हृदिहिलोरव प्रबृत्तेव (Mohāṅ Vrihyapārahagrāñṭisvāsajāvalbharathailihila raurava prabṛdhèsu

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8. पान्धोर्ध्यन बक्तवय (Pāṇḍordyan vaktyabya) — Vartika
9. Asiatic Researches; vol. XV, pp. 95-96
10. Quoted from ‘Krishna Charitra’ (in Bengali) ; Bankim Chandra.
11. Āśvalayana Grihya Sutra, ch. 3, k4, sutra 4 ; सुमन्तु-जैमिनी-वैशाम्पायन-पालसूत्रभाष्य-भारत-महाभारत-धर्मचार्याः जानिति। (Sumantu - jaimini - vaiśampāyana - pailasūtra
   -vāśya-bhārata-mahābhārata-dharmācāryaḥ jānanti.
12. Translated by Hermann Oldenberg, in the Sacred Books of the East seris.
13. Panini; 6.2.38.
i.e., before the words ‘brihi’, ‘parthu’, and others the term ‘mahīna’ is applied and among such words ‘bharata’ is one. From this, Māhabhārata is derived. But, Prof: Weber contends that here the word ‘Mahābhārata’ means the famous tribe of the ‘Bhāraias’ and not the text ‘Mahābhārata’, which apparently, is somewhat farfetched, inasmuch as the tribe has always been referred to as Bhārata tribe and not ‘Mahābhārata’ tribe.

In examining another Sūtra of Pānini14, it is found stated that when the word ‘sthira’ स्थिर becomes ‘tha’ ठ ए and from this ‘gavisthira’ and ‘yudhisthira’ are obtained. Again, in another sutra the word ‘Kunti’ is found15. It has been further stated16 that after ‘Vāsudeva’ and ‘Arjuna’ the ‘pratyay’ प्रत्यय ‘boon’ बून is applied for the 6th case-ending; and two words, viz., ‘Vāsudevaka’ and ‘Arjunaka’ which means the followers of Vasudeva, ie, Kṛiṣṇa, and Arjuna are derived. The word ‘Nakula’, the name of the fourth Pāṇḍava brother, is obtained from another Sūtra17. The word ‘Draunayana’ is derived from ‘Drona’ in another sutra18 and this can only refer to ‘Asthadhāma’ the son of ‘Drona’, and none else.

Apparently, therefore, during Pānini’s time these names were so very famous that the renowned grammarian had to include them in his commentary to explain their derivations. All these names belong to the characters of the Mahābhārata and cannot be construed to mean any other

14. Panini ; 8.3.15.
   गवियुधिव्यामै स्थिरः । (Gaviyudhivyām sthiraḥ)

15. Panini ; 4.1.176.

16. Panini ; 4.3.98.
   वासुदेवर्जुनायामुन । (Vāsudevarjuna vūṇ)

17. Panini ; 6.3.75.

18. द्रोणापर्वताजिवात्स्यतरस्याम् । (Droṇaparvatajīvataṃ)
   rasyām
people or persons. Had Pāṇini referred to only one or two names, which casually referred to any of the characters of the Mahābhārata, it could have been inferred that the names might not mean the persons appearing in the Mahābhārata text; but he has derived the names of some of the Pāṇḍava brothers, their mother ‘Kuntī’, referred to ‘Vāsudeva’ and ‘Arjuna’ and also to ‘Drona’, the preceptor of the famous Pāṇḍavas. These are too many for a coincidence. And as such the question of coincidence may be ruled out. It can, therefore, be positively inferred that the names were very famous during Pāṇini’s time, and as a corollary it can be assumed that the text Mahābhārata was in existence with all these characters and was widely read by the scholars of that period.

There is, however, controversy about Pāṇini’s time. Prof: Goldstuker was of opinion that Buddha was not even born when the Pāṇini sutras were compiled. Not only that, but some of the Brāhmaṇas, Upaniṣhadas and other ancillary components of the Vedic literature were also not composed. Even the Āśvalāyana Grihyasūtras or the Sānkhyāyana Brāhmaṇa19 were not in existence. According to Max Mueller, however, the Brāhmaṇas had began to be compiled from about 1000 B.C. Whereas, Haug says that by this period the compilation of these was complete and had began to be compiled from about 1400 B.C. Consequently, therhfore, Pāṇini’s time, if this is before the compilation of Sānkhyāyana Brāhmaṇa, can be placed at about 1000 B.C. but some oriental scholars are inclined to fix the period of Panini at about 65 - 70 B.C.

Thus, since the name of the Mahābhārata is found in the Āśvalāyana Grihya sutra and in the Sānkhyāyana Brāhmaṇa and also in the sūtras compiled by Pāṇini, it is evident that the text was in existence at that remote period.

19. From certain Astronomical references obtaining in the Sankhayana Brahamaṇa, ch. 1, Br. 3, Prof: Sengupta has found out the date of this Bra. to be at about 1000 B.C. Anc. Ind. Chr; Sengupta ; p. 197.
ANTiquity of the Mahabharata...

Since two books, viz., 'Bhārata' and 'Mahābhārata' were in existence during the time when Āśvalāyana Grihya Sutras were put on record, it is quite possible, in fact it is certain, that the body of the 'Mahābhārata' as it was then, was much shorter than at present; but still the fact remains that both were in existence and the names of some of the characters as we find in the modern recension, had been derived by the eminent grammarian Pāṇini. Without doubt, this speaks volumes for the antiquity of the book itself and the characters.

Krishṇa is an inseparable character from the Mahābhārata. Without him, the Mahābhārata remains incomplete. He was the friend, cousin and the adviser of the Pāṇḍavas throughout the text although they met him for the first time at the 'swayamvarā sabhā' of Draupadī; he went to Hastināpur on a peace mission on their behalf. He advised the Pāṇḍavas to fight. He became Arjuna's charioteer on the battlefield; he allowed his step-sister Suvalrā to marry Arjuna, his friend. Earlier, he had fought with Kaṁsa and Jarāśandha, and killed Śīśupāla of Chedi at the Pāṇḍava court. He agreed to have his nephew Abhimanyu married to Uttarā, the princess of Matsya and, later, their progeny Parikṣhit, who was Krishna's grand-nephew, became the king of the famous Bhārata clan. Actually, throughout the text, his well-tempered mixture of liberality and rigour, his judicious dispensation of advice to Arjuna, his friend, and to the Pāṇḍava brothers in general, are felt in spite of his intention to remain in obscurity. He was also Draupadī's personal friend and had saved her many times from difficult situations. Thus, Krishṇa can, on no account, be eliminated from the dramatis personae of the Mahābhārata.

20. Mahabharata, Udyoga; ch. 71,
21. ibid ch. 82.
22. M. Bh; Sava; ch. 44.
23. M. Bh; Virata; ch. 72.
The earliest reference to the name 'Krishna' is found several times in the Vedic literature. In a hymn of the Rig Veda, it has been stated that the 'Aśvins' allowed 'Viśwaka', son of 'Krishna', to look at his dead child 'Viṣṇapu'; in another hymn the same is reiterated. In several other hymns of the Rig Veda, the composer is Rṣi Krishṇa, a son or a disciple of Aṅgirasa; his son 'Viswaka' is also the composer of a hymn. Again in another three hymns, the composer is Krishṇa, son of Aṅgirasa. In another hymn, the word 'Krishṇa' has been used in the sense of a bird of prey. In the Atharva Veda and in Sānkhāyana Āraṇyaka, the word 'Krishṇa' has also been used in the same sense.

In the Chhyāndogya Upaniṣhada, a verse confirms that Ghora of the Aṅgirasa family speaks to Krishṇa son of Devakī. There is, therefore, no doubt that this Krishṇa is the same as found in the Mahābhārata. We find that Ghora of the Aṅgirasa family had a son 'Kanva' who was also a composer of Vedic hymns. His two sons 'Prakānva' and 'Medhātithi' were also the composers of some other hymns. Therefore, Krishṇa Kanva, Prakānva, Medhātithi were all the sons and disciples of Ghora of the Aṅgirasa family and all of them, including Krishṇa, composed Rig Vedic hymns. And since Vedic division was made by 'Vyāsa' after the hymns were composed, Krishṇa must be a contemporary or a predecessor of Vyāsa. From the Mahābhārata text it is found that Vyāsa is a contemporary of Krishṇa. Krishṇa is also found mentioned in the Taittariya Āraṇyaka, a branch of the Krishṇa

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25. R.V. 1.117.7.
27. R.V. 10 42/44
28. R.V. 10.94.5.
29. A.V. 11.2.2.
31. R.V. 1 36.43.
32. R.V. 1.12.23 & 1.44.50.
Yajurveda. In Pāṇini\textsuperscript{33} Krīṣṇa has been referred to in connection with ‘gaṇa’ (गण). In that sūtra\textsuperscript{34}, ‘Kāṛśnāyana’ and ‘Raṇāyana’ gotras have been derived from ‘Krīṣṇa’ and ‘Raṇa’. These two gotras are respectively Brahmins within the Vaśīstha group. In the Buddhist literature, the name Krīṣṇa has been transformed into ‘Kanha’. In the ‘Digghya Nikaya’\textsuperscript{35}, the story of Krīṣṇa has been told in a distorted fashion. In this text, belonging to about 5th century B.C. the story is that Kaṃsa had a sister named ‘Devagava’. Possibly, this is a distorted version of ‘Devaki’, Krīṣṇa’s mother. Her husband was known a ‘Upasāgara’ and they had two sons: ‘Basudeva’ and ‘Baladeva’. These two sons were sent to ‘Andhakbenhu’ and his wife ‘Nandagopa’. This ‘Andhakbenhu’ appears to be a distorted form of the two tribes ‘Andhak’ and ‘Briśni’. Bāsudeva had two other names: ‘Keśava’ and ‘Kanha’. He has been referred to as belonging to ‘Kanhayana’ gotra. In ‘Mahāummaga Jataka’, Bāsudeva Kanha’s wife was known as ‘Jombovat’, while Krīṣṇa of the Sanskrit literature was married to ‘Jāmvabati’. In the ‘Mahābbāsyā’ of Patañjali, there is a reference to ‘Vasudeva Krīṣṇa’. It has been stated there that everyone knew about the death of Kaṃsa and also that Krīṣṇa was the instrument of his death. At this time, the life and deeds of Krīṣṇa were dramatised and enacted before the public. Poet Vyāsa, who was a contemporary of Cnaṇayaka, has referred to ‘Śri Krīṣṇa’, ‘Gopal Krīṣṇa’, ‘Nanda’, ‘Yasoda’ and others and he has deified ‘Gopal Krīṣṇa’. From all the above, there appears to be a continuity in the references to Krīṣṇa and leaves no doubt that this was the same Krīṣṇa who was involved in the Kurukṣetra war.

Another question that is generally raised is that whether the Krīṣṇa of ‘Vrindāvana’ is the same as that appearing in the Mahābhārata. It is a well known fact that Krīṣṇa was born in the prison of Kaṃsa of Mathurā his maternal uncle.

\textsuperscript{33} Panini; 4.1.99.
\textsuperscript{34} ibid;
\textsuperscript{35} Quoted from Jamuna, Jaistha, 1330, B.S.
He was sent immediately by his father Bāsudeva to Nanda Gopa and his wife Yaśodā, who were Bāsudeva's distant relatives. He grew up at Vrindāvana and, later, in his early youth, went back to Mathurā and killed Kaṃsa. This is also supported by commentator Patanjali. The idea of the Kṛiṣṇa of Vrindāvana, the prince charmer of the Gopa girls, originated from the Vaishnavite literature backed by Vishnupurāṇa, Brahmavaivartapurāṇa and to some extent by Bhāgavatatapurāṇa. In the Mahābhārata, the first appearance of Kṛiṣṇa was at the 'swayamvarā sabhā of Draupadī and since then he was found to be a supporter of the Pāṇḍavas and acted as their adviser. In the Mahābhārata text, there are several instances which prove beyond doubt that the two Kṛiṣṇas are one and the same. As for example, when Draupadī was brought to the Kaurava court, after Yudhisthira had lost her in fraudulent gambling, and was at the point of being denuded by Duśāsana, she prayed to Kṛiṣṇa: she said, 'O Govinda, O Kṛiṣṇa, you who live at Dwārakā, O favourite of the gopa girls,—come and save me; being insulted, I am being drowned in the ocean of the Kauravas'. This clearly indicates that at one time Kṛiṣṇa lived with the gopas. Again, the most important event was when Śiśupāla abused Kṛiṣṇa at the Pandava court when grandfather Bhīṣma proposed the 'argha' or the place of honour to be given to Kṛiṣṇa. Śiśupāla objected to this and became abusive. An important point to be considered is that persons like Bhīṣma and Droṇa would not have proposed the 'argha' to be given to Kṛiṣṇa had his moral character been questionable, or in any way fit for condemnation, as implied by some. Thus, it may be taken that his life with the gopa tribe was beyond reproach. Śiśupāla was Kṛiṣṇa's cousin, just as the Pāṇḍavas were; and he was also his arch enemy. Being frustrated to obtain Rukminī as his wife, whom Kṛiṣṇa ultimately eloped with according to the extant custom, and then married her, his conduct may be considered to have been induced by bias. Therefore, it is expected that he would leave no stone unturned to disclose all the known and imaginary faults of Kṛiṣṇa's
character. But although he went to a desperate extremity, even he, never said that Krīṣṇa was a man of questionable moral character. Among other expletives, he reproved him with being a coward and called him a ‘dāsa’. He invited Krīṣṇa to fight with him. He further referred to his killing of ‘trinavarta’, ‘putana’ and others and also his holding the ‘gobardhana’ for a week and all these he referred to as minor affairs. He further reproved him with having eaten an enormous quantity of food from the gopas, who were not high caste kṣhatriyas. Thus it is seen that Krīṣṇa of the *Mahābhārata* had lived at some time at Vṛidāvana with the gopas, had eaten their food, and had performed some miracles. It is quite natural also that he should be a favourite with the gopas, men and women, boys and girls for his charming character and for the interest he had taken in their welfare. Since he left Vṛindāvana for Mathurā when he was in his teens, the period when he lived with the gopas can only be when he was very young.

Before entering into the question of interpolation in the *Mahābhārata*, it needs mentioning that scholars are almost unanimous in their opinion that some verses in the *Mahābhārata* have been inserted later. They further state that there are three stages of interpolation, but at this distant date, except a very few, it is difficult to find out these from the original verses. In examining the number of verses included in the *Ādipava, Anukramanikā adhāya* of the available recension of the *Mahābhārata*, with those actually existing in the text, it appears that there are some discrepancies, and these are enumerated below:

<table>
<thead>
<tr>
<th>Parva</th>
<th>No. of verses as mentioned in Adiparva.</th>
<th>No. of verses as actually found in the text.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ādiparva</td>
<td>8884</td>
<td>8479</td>
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36. *Mahābhārata; Adiparva*: ch. 2

—5
<table>
<thead>
<tr>
<th>Parva</th>
<th>No. of verses as mentioned in Adiparva</th>
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<tr>
<td>Saviparva</td>
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<td>Vanaparva</td>
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<td>Udyogaparva</td>
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<td>Bhismaparva</td>
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<td>5856</td>
</tr>
<tr>
<td>Dronaparva</td>
<td>8909</td>
<td>9649</td>
</tr>
<tr>
<td>Karnaparva</td>
<td>4964</td>
<td>5046</td>
</tr>
<tr>
<td>Salwaparva</td>
<td>3220</td>
<td>3671</td>
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<tr>
<td>Sauptikparva</td>
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<td>811</td>
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<tr>
<td>Striparva</td>
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<td>Sindiparva</td>
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<td>Anusanaparva</td>
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<td>3320</td>
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<td>Asramavasikaparva</td>
<td>1506</td>
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</tr>
<tr>
<td>Mauyaparva</td>
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<td>292</td>
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<tr>
<td>Mahaprasthanikaparva</td>
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<td>109</td>
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<tr>
<td>Swargaroohanaparva</td>
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<tr>
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<td><strong>91015</strong></td>
</tr>
<tr>
<td><strong>Harivamsa</strong></td>
<td><strong>16374</strong></td>
<td><strong>16374</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>101122</strong></td>
<td><strong>107339</strong></td>
</tr>
</tbody>
</table>

Thus, although it has been mentioned in the Anukramanikā Adhāya that the Mahābhārata is comprised of one hundred thousand verses, it is not actually found to be so. In actual fact, including Harivamsa the contents consist of 7389 verses extra. Therefore, even taking that the original text consisted of one hundred thousand verses, there seems to have been interpolations in the text itself from time to time. At the present stage, it has become very difficult to

38. The date of Harivamsa seems to be much later than that of Mahābhārata and Horace Hayman Wilson states in his essays: 'The internal evidence is strongly indicative of a date considerably subsequent to that of the major portion of Mahābhārata'
sort out the original ones from those inserted at a later date. For the purpose of this paper, however, it is desirable that the facts and events connected with certain personages in the text should be considered for further examination; and they are the Pandavas, the Kauravas, Kṛiṣṇa, Balarāma, Bhiṣma, Dhṛtarāstra, Vyasa, or, in other words, those round whom the events revolve. The war should be taken to have occurred at some time or other which should be determined on the basis of the happenings recorded in the Mahābhārata itself and in other relevant documents.
CHAPTER IV

THE DATE OF KURUKSHETRA WAR

(A) GENERAL & HISTORICAL.

The idea that has been considered sacrosanct for more than a century in the western world is that the Indian civilisation, i.e. Vedic civilisation was an imported item from the west; and this importation was made, or rather was brought about by the 'Aryan' invasion or migration from the west at about 1500 B.C. Such fixed ideas are, however, harmful for the reconstruction of history. The historical past of a country, or for that matter, of mankind, is pieced together from indirect knowledge obtained from various sources. Excavations, old texts, legends etc. are all utilised to form a working hypothesis. From all these data an impressive and interesting construction is slowly made. But, unfortunately, sometimes, it tends to become a bye-product of a pre-determined pattern of ideas into which these data are fitted. Consequently, such reconstruction of the historical past becomes only relatively true. In the reconstruction of the proto-history of India, the same pre-conceived patterns have been brought to the fore, and any new aspects, even if they turn up, are not likely to be accepted for replacement of the previous and the accepted ideas.

Prof. Max Mueller, in his attempt to find out the date of the composition of the Rig Vedic hymns, divided the vedic literature into four phases : viz, the Chhandas the Mantras, the Brāhmanas and the Sutras. Taking the last or the Sutra period, as belonging just prior to the spreading and political supremacy of Buddhism, at about 4th century B.C, he arrived at a date of about 1200 B.C. when the earliest vedic hymns were supposed to have been composed by assigning 200 years to each of these phases. He, however, admitted that this limit of 200 years "can be assigned to each period only under the supposition that during the early periods of history the growth of the human mind was more luxuriant than in later
times”. Dr. Haug, followed the same literary method or the linguistic basis of determining the age of the Vedas. He assigned 500 years to each phase and fixed the commencement of the period when the vedic literature began to originate at between 2400-2000 B.C. At this, Tilak commented “there is hardly any inherent improbability if a third scholar proposes to extend the duration of each of these periods up to something like a thousand years”. Hence, this method of determining the age of the vedic period has its own pitfalls, which although may form the basis of many scholarly disquisitions, can neither solve the problem nor satisfy the curiosity of the serious students.

The fixation of the period of compilation of the Rig Vedas turns out to be an important factor for the reconstruction of the Indian proto-history as the date of an important event like the Kurukṣhetra war is dependant on the time of the vedic composition. The war has to be timed after the vedic composition. Taking the ‘Aryan’ invasion theory of Prof. Max Mueller as accepted, the invaders had to spend one or two centuries for consolidation and then only they could start composing the hymns. Thereafter, with the establishment of normalcy, the clans increased and fought with each other. Thus, the anterior date of the Kurukṣhetra war, in such circumstances, cannot be placed prior to, say, 1100 B.C. But this date is not compatible with other evidences found in the Indian Purāṇas and later traditions and, therefore, needs thorough examination; and this examination should encompass all angles. Therefore, to reconstruct the chronological sequence of the Indian proto-historic period, all scientific resources available in the shape of Philological, Geological, Anthropological, Archaeological and Numismatic evidences, where available, should be made use of in addition to the historical data available in the Purāṇas.

1. The Orion, Tilak, p. 3.
2. Preface to Rig Veda, vol. iv, p. vii
3. The Orion, Tilak, p.4.
Apart from the above, there exists another body of evidences in the shape of Astronomical data, which, as far as the particular event is concerned tends to be more accurate in timing events than any other data; and combination of all these can go a long way towards reconstruction of Indian proto-history. Such Astronomical data may consist of (i) the position of planets at a given time, (ii) the advent of a particular season in a particular month or connected with a particular star, (iii) the time of the commencement of the year, (iv) visibility of a particular star above the horizon before dawn or after sunset indicating the advent of a season, and (v) recurrence of eclipses at a given period. The time periods obtained on the basis of the above factors may be considered as reasonably correct provided it has some semblance of agreement with the scientific and historical data and also if there is no ambiguity in the language from which such Astronomical data are collected.

Excavations carried out at some sites near modern Kurukkshetra have unearthed some relics of the Mahābhārata town-ship of Hastināpur. The excavator, Prof.: B. B. Lal has assigned the 'finds' to a period of about 900-800 B.C. on the available evidences. No wide scale excavation has yet been undertaken to find out if other and earlier sites could be unearthed and, therefore, this particular evidence, except emphasising the truth of the Mahābhārata accounts of the cities, is of no definite help in determining the time period of the Kurukṣetra war. No numismatic evidence of the time has yet been found, and till these are found nothing can be elaborated in this respect. The Anthropological evidences of the war period also are not available and cannot be expected except in some isolated cases, as the method for the disposal of the dead was by cremation as found in the Mahābhārata text. Besides, the geo-physical condition of India with its humidity, and soil contents containing living matters and salt, reduces the possibility of any major Archaeological or Anthropological finds. Further, the chance of finding any wooden contrivances or any other perishable materials is also extremely remote. Therefore, any
approach to find out the chronological sequence of the Kurukshetra war should be made through the media of other available data.

The eminent historian V. A. Smith quoted the illustrious Elphinstone to have observed that in Indian history "no date of a public event can be fixed before the invasion of Alexander" and states that the sources of early history of India may be arranged under four classes: viz, (i) tradition, (ii) writings of foreign travellers and historians, (iii) evidence of Archeology, and lastly, (iv) "the few works of native contemporary, or nearly contemporary literature which deal expressly with historical subjects". The eminent professor has not, however, included Astronomy as one of the methods for the determination of early chronology. The most important basis for determining the chronological sequence of the Indian proto-history by Astronomical method is the phenomenon known as the precession of the equinoxes caused by the revolution of the earth round the sun along the ecliptic. The inclined position of the axis of the earth and the formation of an angle of $23\frac{1}{2}^\circ$ between the celestial equator and the ecliptic forms two points of intersection. These two are known as the equinoctial points. The pole of the celestial equator makes a complete revolution round the pole of the ecliptic. The effect of this movement causes the apparent backward march of the equinoctial points along the ecliptic. This movement is known as the precession of the equinoxes. The effect of this movement, in the long run, is the shifting of the months, seasons, beginning of the year etc. As for example, Varahamihira, in whose time the vernal equinox coincided with the end of Revati (i.e., $\omega$ Piscium whose tropical longitude on 1st January, 1976 was $19^\circ32'17''.8$) refers to an early period.

4. The Early History of India, V. A. Smith, P.I.
5. Hist. of India; Elphinstone (ed. Cowell—9th ed) P.II.
6. Colebrooke’s Essays, vol. 11, p. 387; The verse is found in Dr Thibaut’s edition of the Pancha Siddhantika iii. 21:—

आश्लेषकार्यदर्शित: किलोण्किरणस्य ।
युक्तमयं तदासीत् साम्प्रतमयं पुनर्सुतः ॥
when the summer solstice used to occur when the sun remained in the middle of divisional Aslesha, or $\ell$Hydrae, whose tropical longitude for 1st January, 1976 was $132^\circ 0' 40''.8$; calculations show that this combination was possible at about 1400 B.C. when the equinox was in Bharani, i.e., 41 Arietis, whose tropical longitude for 1st January, 1976 was $47^\circ 52' 5''.8$. Thus, many such data obtained from the natural phenomenon may be interpreted with the help of the Astronomical science and can be utilised to a great extent for the reconstruction of Indian chronology.

Since some of the major sources, which are considered more scientific, viz. the Geological, Archaeological and the Anthropological, are not available in respect of the Kurukshetra war, traditional and other references current in India in this context have to be considered for reconstruction of the time period of the Kurukshetra war. These available references are summarised and enumerated below:

(i) historical data obtained from the accounts of the Greek historians and travellers,

(ii) traditional references,

(iii) data available in the Purāṇas, and

(iv) calculations on the basis of Astronomical data obtaining in the Mahābhārata text.

Out of all the accounts of the Greek historians and travellers, probably the most authentic were the accounts of Megas-

Āsleṣādhārdāsidyadā nivrittiḥ kiloṣñakiraṃshya Ṉ
Yuktamayanam tadāsit sāmpratamyanam Punarvasutaḥ ṛ
"When the return of the sun towards the south (i.e., the summer solstice) took place from the midde of Āṣleṣā, the Ayana was right: at the present time Ayana begins from Punarvasu".

7. The tropical longitude of the middle of the divisional Aslesha on 1. 1. 1976 was $136^\circ 51' 17''.8$ and the solstitial shifting since that period to 1.1.1976 has been $46^\circ 51' 17''.8$. Hence the time elapsed comes to about 3372 years at the rate of 1º for each 72 years. This brings the period of the epoch to about 1400 B.C.
thenes. Unfortunately, however, the original accounts are lost and references to these can be found only in fragments from the quotations of other writers and authors. These accounts of Megasthenes have not been given due consideration by the western Indologists probably on account of an 'idée fixée' that the 'Indo European' or the 'Aryan' invasion occurred at about 1500 B.C. as suggested by Prof: Max Mueller. In this particular case at least, his suggestion, although quite daring at the time when he made it, was accepted as a scientific truth leaving aside all other available information, tradition, Purānic data and the writings of the foreign travellers and historians; whereas, his explicit statement that by 'Aryan', he meant a linguistic group and nothing but that, has not been given due consideration while determining the Anthropological species of the so-called 'Aryans' or for the assessment of the period of the so-called 'Aryan' invasion; and although later he changed his views about the 'Aryan' racial group categorically, his first idea still looms large in the minds of many Indologists both oriental and occidental.

In examining some of the statements of the Greek historians, we find Pliny quoting Megasthenes that "from the days of Father Bacchus to Alexander the Great their kings are reckoned at 154, whose reigns extended over 6451 years and 3 months"; Solinos quotes to say "Father Bacchus was the first who invaded India, and was the first of all who triumphed over the vanquished Indians. From him to Alexander the Great 6451 years are reckoned with three months additional, the calculation being made by counting the kings who reigned in the intermediate period, to the number of 153". Arrian states that "from the time of Dionysos to Sandrakottos the Indians counted 153 kings and a period of 6042 years, (but

8. Max Mueller was faced with the charge that the Vedas are modern forgery and he had to disprove if by tangible evidences.
10. Solinos : 52.5 in Anc. India, McCrindle, p. 115.
among these a republic was thrice established)..... and another to 300 years, and another to 120 years"11.

Thus, if any credence is to be placed on these Greek historians including Megasthenes, who was the ambassador of Seleukos Nikator at the court of Chandragupta between the years 302 B.C. to 288 B.C. and had widely travelled in India and in western Asia, it appears that, (i) there was a continuous history of Indians in India for more than 6450 years before the time of Megasthenes, (ii) that there were three kingless periods of 300 years, 120 years and another for an unknown period which either Megasthenes or Arrian could not find out, (iii) that each king reigned approximately for 41.9 or 42.16 years (taking 154 or 153 kings), and (iv) that since the time of Bacchus, who was also known as Dionysos, Megasthenes had heard of no invasion of India. From the above, it seems that 153 or 154 kings reigned for about 6451 years or 6462 plus years, (the plus indicating the third unknown period as recorded by Arrian) up to the time of Chandragupta Maurya, giving an approximate period of 41.9 or 42.16 per king taking into account the total number of kings to be 154 or 153 respectively. Here, Dionysos or Father Bacchus may be identified with Manu Vaivasvata; and from him to the beginning of the Christian era, therefore, about 6774 years had elapsed, taking 323 B.C. as the period of Chandragupta Maurya. According to some of the Purânas, the 91st king from Manu Vaivasvata, and according to others the 88th king of the Ikṣvāku dynasty from Manu Vaivasvata was involved in the Kurukṣetra war. Thus, 90 kings at 41.9 years per king comes to about 3771 years and brings the period of the war to about 3003 B.C. If, however, the number of kings from Manu Vaivasvata who was involved in the war is taken to be the 88th, the year of the battle comes to about 3129 B.C. Considering the antiquity of the period, both these are very near to the traditional date of the Kurukṣetra war which is 3137 B.C.

Nowhere in the world, and consequently not in India, was there or could there have been a system of time reckoning in respect of the pre-history or proto-history which can be reconciled with the modern idea of time fixation in terms of the Christian era. The people of ancient India referred to a past period or to a particular year by the Jupiterian cycle of years, viz, Kharā, Virodhi etc; and there are sixty such years. In other places of the world some other method of time reckoning was adopted. Here, in India some of the important events of the ancient period have been kept on record though the media of parables and allegories. No doubt this has caused great difficulty in fixing the time period of any historical event.

The great battle of Kurukṣetra, which took place at the juncture of the Dwāpara and the Kali era, brought a new epoch in the proto-history of India. It was, as it were, a resting place of the ancient cultural development of the Vedic Indians, something like a link between the proto-history and the recorded history in India. The material and the cultural development which the Indians attained during the previous three yugas (kritā, tritā and dwāpara) gradually started to decline. In fact, it came almost to an end after the Kurukṣetra war, when most of the young blood, the flowers of the nation, died at the war.

Looking behind at the foregoing paragraphs, a date near about the traditional date of the Kurukṣetra war, i.e, 3137 B.C. is arrived at. Thus, the theory that the date of the war at about 3137 B.C. is the modern Astronomical creation of Aryabhata, as held by some, falls through. Apparently, the same idea of the Kurukṣetra war, i.e, round about 3137 B.C. was also cherished by the Indians of the 4th century B.C. as noticed in the statements of the Greek historians. If, however, this date is corroborated by other evidences, there could have been no Aryan invasion or migration at about 1500 B.C.; in that case the history of India has to be revised.
CHAPTER V
THE DATE OF KURUKSHETRA WAR
(B) TRADITIONAL.

Indian tradition fixes the beginning of the Kali era at about 3101 B.C. Accordingly, the time period of the Kurukṣheṭra war is to be traced back to about 3137 B.C., since the Kali era was supposed to have begun 36 years after the war, with the demise of Krīṣṇa. In the Mahābhārata text, statements are found to the effect that the war was fought at the juncture of the Kali and the Dwāpara eras¹; and it is also specified that the Kali era was just about to begin². It has been further stated that the Kali era has begun, and with it, the vow of the Pāṇḍava (Bhīma) has been taken; hence let the Pāṇḍava have his freedom from the debt of his word of honour, and of his enmity³. Considering both these statements, it is, therefore, found that Kali era had already began during the period of the Kurukṣheṭra war, or was just about to begin within a short period. The Indian traditions in respect of the war period, although confusing, are, at the same time very interesting. There are several traditions extant in respect of the Kurukṣheṭra

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¹ Mahabharata : Adi. 5.13
² Mahabharata : Vana. 149.36
³ Mahabharata : Salwa. 61.23.
war. The more important among these are: (i) the Aryabhata tradition, (ii) the Vriddhya Garga tradition, (iii) the Saptarshi era tradition, (iv) the Bhaskara tradition, (v) the tradition of Krishna's birth, (vi) the Kalhana Miśra tradition, and (vii) the tradition of the Aihole inscription of Pulakeshin II.

Before examining these traditions, it is necessary to mention that the various traditional dates of the advent of the Kali era, or of Kurukṣetra war, are to some extent, although very minor considering the antiquity of the period, contradictory to each other; but one very important and interesting fact emerges out of this and it is that, if any of these traditional dates are considered as acceptable, then there could have been no occasion for any 'Indo-European' or 'Aryan' cultural or military invasion or migration about 1500 B.C. It is, of course, admitted that just like the linguistic or the literary method of dating the Indian past, as accepted by Prof. Max Mueller, or Prof. Haug, these traditional dates are also not foolproof; but as already stated, if all these types of findings point out to a particular period, there is every likelihood that the period in question is more or less reasonably logical and there can be no deterrence to its acceptance. The above mentioned traditions may now be examined ad seriatim:

(i) The Aryabhata Tradition:

Aryabhata, the greatest astronomer of his period, flourished at about 499 of our era. His assessment of the beginning of the Kali era was 'midnight at Ujjain terminating the 17th February, 3102 B.C.' according to Surya Siddhanta, and the 'ardharātrika' system of Aryabhata's astronomy as described in the 'khandakhadyaka' of Brahmagupta. Further, the Kali era began, according to Aryabhata, from the sunrise at

6. Dasagita, 2:

"वुढ़ह्लुयाजाकौक्याच्छ लक्ष्यायाम"
"Budhâhnyâjârkordayacca Laṅkâyām"
Lanka (supposed to be on the equator and on the same meridian with Ujjain) from the mean sunrise on the 18th February, 3102 B.C. Commenting on this, Baily, Bentley and Burgess have disagreed and have refuted the planetary positions as pointed out by Aryabhata. Burgess further observes: 'it seems hardly to admit of a doubt that the epoch was arrived at by astronomical calculation carried backward'. That is, in other words, the period was the astronomical creation of Aryabhata. But it has been shown before from the observations of Greek historians that the tradition in respect of the war to have happened at about 3137 B.C. or thereabouts was current in India at about 4th century B.C.; i.e., at the time when Megasthenes had collected his information about 800 years before Aryabhata, when he was attached to the court of Chandragupta Maurya as an ambassador of Seleukos. Therefore, the period of the Kurukshetra war pointed out by Aryabhata cannot be his astronomical creation. He might have been incorrect by a few years, but apparently, he did not create the legend. It was already there as an accepted truth. In further examining his other statements, it is found that Aryabhata, in his Kalakriya comments:

7. Anc. Ind. Chr. Seugupta; p. 36.
Kurukṣhetra war comes to 3114 B.C. in the event the Purānic version that the battle was fought 36 years years earlier than the advent of the Kali era is accepted. If, on the other hand, it is considered that Aryabhatta was born in 463 A.D, in consonance with the second interpretation, the beginning of the Kali era comes to 3101 B.C, and the war period to 3137 B.C. Hence, from the Aryabhatta tradition two dates for the Kurukṣhetra war period are obtained, viz, 3114 B.C. and 3137 B.C, according as the interpretation is taken as correct. One of these dates is 3114 B.C, a date very near to the traditional date of the war, i.e, 3137 B.C. and the other is 3137 B.C. Therefore, apparently, either the second interpretation is incorrect or that the date of his birth should be 463 A.D, and not 499 A.D.

Further, Aryabhatta has stated in his Dasagitika, that in the present Kalpa, six Manus, 27 Mahayugas and three quarter Yugas had elapsed before the Bhārata thursday. What is actually meant by this statement is that the battle was fought during the junction of the Dwāpara and the Kali eras. The Mahābhārata text states that in the interval between the Dwāpara and the Kali eras, the war between the two armies belonging to the Kurus and the Pāndavas was fought at ‘samantapañchaka’ and that the Kali era was on the verge of emergence. From the above it appears that the Kali era did not come into effect with the Kurukṣhetra war but was to begin shortly. In the Mausala Parva of the Mahābhārata, it is said that, king Yudhisthira, in the thirtysixth year of his reign saw strange

11. Mahabharata; Adi; 2.13.
   अन्तर्येष्व सम्प्राप्ते कलिद्रापरयोरसूर्
   स्ममतपदे सुवर्य कृष्णपाण्डवस्ययो: ||
   Antare caiva samprapte kalidvāparyorabhut ||
   Swamantapaṇcace ke yuddaṁ kurupāṇḍavasenasayoḥ ||
   एतत् कलियुगः नाम अचिराद् यत् प्रबर्तते ||
   Etaṭ kaliyugam näma achiraṭ yat pravartate.
symptoms;¹⁸ and as Gandhari had cursed, Kṛṣṇa was to die an ignoble death 36 years after the Kurukṣetra battle.⁴ Again from the Mahābhārata and also from the Viṣṇupurāṇa, it is noticed that Kali era began from the day when Kṛṣṇa left this mortal world, and, that was, according to tradition, 36 years after the Kurukṣetra war. Since traditional Kali era began in the year 3101 B.C. after the death of Kṛṣṇa, the war according to this tradition must have taken place sometime in 3137 B.C. Hence, the statement made by Aryabhata in his Dasagītika does not appear to be in accordance with the Purānic tradition inasmuch as he states that the Kali era began since the ‘Bhārata thursday’. Even taking this minor discrepancy into consideration, it appears that according to Aryabhata, the war started in the year 3101 B.C. Apparently, there is some

13. Maha. Bh. Mausala:

“ददर्श विपरितानि निमित्तानि युधिष्ठिरः.”

Dadarśa viparitāni nimittāni yudhiṣṭhirāḥ.

14. Maha Bh. Striparva: 25.14

त्वमयु परिष्ठते बर्षे पटिश्रे मधुसूदनः।
हतजाति हतामात्त्यो हृतपुत्ती बनेचरः।
कुसुमितनाथ्यु पायेन लिषन समवास्यसि।
Tvampypasthite varṣe ṣaṭṭrimśe Madhūṣūdanaḥ
Hatajñātiḥ hatāmātyo hataputro vanecaraḥ
Kuṭṣitenāthypāyaṇa nidhanam samavasyasasi

15. Mahābhārata: Vana: 99.428

यस्मिन कृष्णो दिवं यातस्तस्मिन्नेव तदा दिने।
प्रतिपन्नं कलियु पर्यवस्थ संस्थानिन्वोधत।
Yasmin kṛṣṇo divam yatost旻inneva tadā dine
Pratipannaḥ kaliyagastasya sankhyannibodhataḥ

16. Vitru Purana: IV. 24.110

यस्मिनान कृष्णो दिवं यातस्तस्मिन्नेव तदाहृन।
प्रतिपन्नं कलियुगे ।
Yasmin kṛṣṇa divam yatost旻inneva tadāhānī
Pratipnanmaḥ kaliyugam
confusion about the advent of the Kali era and the date of the Kurukṣetra war; the emergence of the Kali era has been confused with the date of the Kurukṣetra war both by Āryabhatta and also in the Athole Inscription of Pulakeshin II.

(ii) The Vriddhya Garga Tradition:

Quoting Vriddhya Garga, Varāhamihira, the great astronomer, has observed in his ‘Brihat Samhitā’:

आसन्न मधासु मुनयाः शासकि पृथ्वी युधिष्ठिरे नूपले |
पञ्चदिक पञ्चधिष्ट्यात् शक कालस्तस्य राजश्च ||
Āsaṅ maghāsū muṇayaḥ sāsati prtvīṃ yudhiṣṭhīre

nrpatau ||

Saḍaddika pañcaddiyutah śaka kālastasya rājñaśca ||
the first half of the verse reads: at the time when king Yudhiṣṭhīra was ruling in the world, the seven stars were in the Maghā constellation (α Leonis). The second half of the verse appears to be archaic with ambiguous meaning. This has been interpreted to mean either that (i) in the era of that king 2512, 2526, 2526 or 2556 years have elapsed, or (ii) it is 2512, 2526, 2536 or 2556 years till the time of the Śaka era. The number of the years varies according as the part of the verse ‘पञ्चदिक पञ्चधिष्ट्यात्’ (saḍaddikapañcaddiyutah) is interpreted. If the word ‘ddika’ is taken with ‘pañcena’, it becomes ‘ddika-pañcha’ and may be construed to mean 2556. On the other hand, if it is taken to mean a pair, or a square or simply a double and added with ‘shaḍa’ षड, the years come to 2512, 2526 or 2536. If the first interpretation is taken as correct, it would mean that the elder Garga is referring to Yudhiṣṭhīra śaka (era), which probably began either at the time of his ascending the throne or more probably from the time when he renounced the world after 36 years of reign at about 3101 B.C. i.e, the year of the beginning of the traditional Kali era. In the circumstances, the elder Garga was making his composition either in 589 B.C, 565 B.C, 575 B.C, or in 545 B.C. according as the interpretation of the period is taken into consideration. The last date, i.e, 545 B.C. is very near the date of the Buddha Nirvāṇa according to the

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Ceylon Burma tradition and is not to be ignored without consideration. On the other hand, if the second interpretation is taken into consideration, the period of Yudhiṣṭhira’s rule comes to a period of either 2434 B.C., 2448 B.C., 2458 B.C., or 2478 B.C., taking 78 A.D., i.e., Salībāhana saka era as the meaning of the words ‘saka kāla’ in the verse. In that case the time period of the elder Garga has to be placed after 78 A.D.; but tradition has it that Varāhamihira, who quoted from the composition of elder Garga, was the court astronomer of Vikramāditya, who flourished at about 58 B.C. Therefore, it is quite logical to assume that the elder Garga was referring to the ‘Buddha Nirvāṇa’ saka or era as the ‘saka kāla’ in which case king Yudhiṣṭhira’s reign is placed at about 3101 B.C. Yudhiṣṭhira, with his brothers and their common spouse Draupadi, renounced the world soon after Kṛiṣṇa’s death and it is quite likely that he did so in the year 3101 B.C., when Kṛiṣṇa died and the Kali era began. In case this interpretation is accepted, the period of Kurukṣetra war comes to 3137 B.C.

(iii) The Saptarshi Era Tradition:

The first portion of elder Garga’s statement quoted by Varāhamihira, viz., “आसनं मधुसु युणयः शासति पृथ्वीयं यूधिश्चिरे नृपति” showing the position of the ‘मुनयः’ or the “Great Bears”, is a traditional Purānic statement. Pargiter has quoted a verse17:

सप्तर्षियो मधुयुक्तः काले परिक्षिते जातम् ॥
अन्ध्रास्ते तु च बृहस्पतियो महिष्यन्ति मते मम ॥
Saptarṣayo maghāyuktāḥ kāle parīkṣite satam ॥
Andrānte tu caturvīmśo bhavisyanti mate mama ॥

i.e., the seven Rishis or the Great Bears were conjoined with the Maghās or Leo at the time of Parikṣit; according to my opinion, they would be in the twenty-fourth constellation after the period of the Andhras. Now, astronomically, the Great Bears are fixed constellations and cannot have any movement. But, in various Purānic verses the movement of the Great Bears has been taken as the measurement of time. Apparently, this

statement does not carry any meaning in the astronomical sense and, therefore, either this was a misstatement or that the key to the meaning of this statement has not been handed down to their successors by the composers of the Purānas. The Purānic description of the movement of the Great Bears is as follows:

सप्तर्षिनाँपुर्वी दृश्यते हा दिती निति।
तयोर्मध्ये तु नक्षत्रं दृश्यते यत्र समं दिब्र।
तेन सप्तर्षियो युक्तास्तिशंक्त्यवदशतं नूणाम्।
नक्षत्राणामूर्त्याणि योगशैतनिःशतं न।
सप्तर्षियो माध्युक्तं काले परिक्षिते शतम्।
Saptarṣiṇāṇa yau pūrvau dṛṣṭyaḥpyuditaḥ niṣi |
Tayormadhye tu nakṣatraṃ dṛṣyaḥ yat samāṃ divī ||
Tena saptarṣayo yuktāśṭhantyaṃbdaśataṃ nṛṇām |
Nakṣatraṇāṃṣiṇīṇa yogasaitaṇṇidāraṇaṃ ||
Saparṣayo mahāyuktākale pārīkṣite śatam ||

"the two front stars of the Great Bear, which are seen when risen at night, the lunar constellation which is seen equally between them in the sky, the Great Bear is to be known as conjoined with that constellation 100 years in the sky. This is the exposition of the conjunction of the lunar constellations and the Great Bear. The Great Bear was conjoined with the Maghāś in Parīkṣit's time 100 years". Similar statements are also found in the other Purānas. In the Bhāgavata, Śūka said to king Parīkṣit:

सप्तर्षिए त्यो पुर्वी दृश्यते उदिती दिब्र।
तयोस्तुमध्ये नक्षत्रं दृश्यते यत्वस्म निति।
तेनेतर ऋषिो युक्तास्तिशंक्त्यवदशतं नूणाम्।
ते तवदेव दिजाः काले अचहुन चाचिदात सत्या: ||
Saptarṣiṇāṃ tu yau purvau dṛṣṭyaḥ uditaḥ divī
Tayostumadhye nakṣatraṃ dṛṣyaḥ yaṭśamaṃ niṣi ||
Tenaita ṣayao yuktāśṭhantyaṃbdaśataṃ nṛṇām
Te tvadoye dvijākale adhunā cāṣrīta mahāḥ ||

18. Dynasties of Kali Age: Pargiter, p. 59
“The Saptarṣhis remain, for one hundred terrestrial years in conjunction with that Nakṣatra which is seen rising at night, in the middle of the first two stars of the Saptarṣhi group which are seen risen in the sky. The Saptarṣhis, at present, in your reign have occupied Maγhā”. In the Viṣṇupurāṇa, also, a similar statement is found. The first two lines are the same but the second portion of the verse reads:

तेन सप्तर्ष्य युक्तास्तिष्ठत तु नृणाम् ।
तेतु परिक्षिते कालेमधास्बसुनिविष्टम्॥

Tenausaptarsaya yuktāstiṣṭhantyabdaśataṁ nṛṇām ।
Te tu pārikṣite kāle maghāsvasaṇ dvijottamaṁ॥

“O Brahmin, the Saptarṣhis or the Great Bears were in conjunction with the constellation for hundred years in Maγhā at the time of Parikṣhita”.

This problem has posed a serious difficulty, and as interpreted by Prof: Sengupta\textsuperscript{20} brings about such absurd dates as 371 B.C. or 300 B.C. for the period of Parikṣhita, the successor to king Yudhīṣthira to the throne of Hastināpur, that he has rejected these outright without any further serious consideration. He further states that it “should thus appear that the time indicated by this Purāṇic statement as to the position of the Great Bear in Parikṣhita’s time, belonged neither to Parikṣhita nor to this Purāṇic astronomer. It is absolutely valueless for our purpose”\textsuperscript{21}. Another interpretation\textsuperscript{22} of the Saptarṣhi Yuga or the cycle of the seven Rishiśis is supposed to be based on precessional rate. The equinoctial points complete one full revolution of the ecliptic roughly in 27,000 years. There are 27 asterisms covering 13° 20’ each of the ecliptic. The precessional rate thus comes to 1000 years for one asterism, the solstitial points likewise have this backward motion at the same rate. The solstitial colure meets the ecliptic and also the equator at different points at different times owing to this precession.

\textsuperscript{20} Anc. Ind. Chr. Sengupta, p. 57.
\textsuperscript{21} ibid p. 57.
\textsuperscript{22} Article: ‘Precession & Indian Eras’: M. V. Ramakaishnan; in the Astrological Magazine; January, 1959.
The distance between Marichi, the tail star of the Saptarṣhis and the middle points of the first two stars Pulaha and Kratu of the same constellation measured along the celestial equator is roughly 36°, which is a tenth of the circumference of the ecliptic. The time taken by the solstices (as well as the equinoxes) to cover this distance is 2700 years. This distance is divided into 27 equal parts, which are named after the 27 Nakṣatras. The time taken by the solstices to cover each of these parts is 100 years. In the Rig Veda, this is referred to as the centennial motion of the Rishi. The seven Rishi which are the stars of the Ursa Major group were supposed to remain for one century in each of the Nakṣatras. It has been stated in the Purānas, that the Saptarṣhis were in Maghā for 100 years, at the time of Yudhishṭhira. The meaning is that the solstitial colure passed through Maghā and remained in Maghā for 100 years.

According to the “above interpretation the time of Parikṣhit stands at the neighbourhood of 1400 B.C.,” but the Purānas state that, the Saptarṣhi line passed not only through the middle point of α and β Ursae Majoris, but it also passed through the middle point of the Nakṣatra Maghā at the time of Parikṣhit. Prof. Sengupta states that finding of the time is not to be done with the help of α and β Ursae Majoris alone, leaving aside the Nakṣatra division Maghā or the star Regulus. On the other hand, it may be shown that the summer solstitial colure passed through Maghā in 2350 B.C.; but as the middle point of the Nakṣatra Maghā is about 40° east of the star Regulus, the time when the solstitial colure bisected that Nakṣatra division is 2398 B.C.

Thus, from the above it seems that the method of calculating the Saptarṣhi era is not only not known to us but various scholars interpret the same in various ways. Since it is traditional in the Purānas to mention the position of the Saptarṣhis in respect of the divisional Nakṣatra, the matter has been discussed here. But the reference to the eras in the Purānas

23. Anc. Ind. Chr.; p. 57.
does not at present help in any way to fix the time period of the Kurukṣetra war.

(iv) The Bhaskara Tradition:

Bhaskara, the great astronomer, who flourished at about 1150 of our era has commented in his Siddhānta Śhīromani as under:

“नन्दादीन्त्र गुणास्तवत्वा शकनृपत्वाचते क्षेत्रशुद्धिरात्”

Nandādindra guṇāṣṭathā śaka nṛpasyānte kalervātsara
i.e, 3179 years of Kali have elapsed by the end of the period of the Śaka king. And taking this as the Śālivāhana śaka of 78 A.D. it appears that, according to Bhāskara, the Kali era began at 3101 B.C. In the circumstances the Kurukṣetra war period would come to 3137 B.C. Apparently, Bhāskara has accepted the traditional period of the Kali era and of the war.

(v) The Tradition of Krishna's Birth:

Dr. P. S. Sastry has quoted a verse from the Chinnamasta Khanda of the Śakti Sangama Tantra24 in respect of Kṛiṣṇa’s birth as under:

श्रावणे चाष्टमी कृष्णा विचुरोहिणी संयुता ॥
ब्रजयोगे मध्य्रात्राधूर्यः कृṣ्णो हृति स्वयं ॥
कंसस्य वस्त्रायां अज्ज्वलन्ति द्रितिययः ॥

Dvāpare samanu prepte virodhī vaṭsare śive ॥
Śrāvaṇe cāṣṭämikṛṣṇā vidhurohiṇī samyutā ॥
Vajrayoge madhyrātra pūrṇaḥ kṛṣṇo Hariḥ svayam ॥
Kaṃsasya vadhārthāya Arjunasya hitāya ca ॥

From this, certain data are obtained. These are (i) that it was a Virodhi year, (ii) that it was the eighth day of the dark half of the month of Śrāvaṇa, (iii) that the moon was in Rohiṇī or α Tauri (Aldebaran), (iv) it was Vajra yoga, (v) it was the middle of the night, and it was the day of the solstice. Naturally, it was the summer solstice and not the winter solstice.

Certain very important astronomical data emerge out of this. These are: the moon was in *Aldebaran*, whose tropical longitude on the 1st January 1976 was $69^\circ \ 27' \ 12''.8$. Further, on the eighth day previous to the day of *Krishna*’s birth there was a full moon, and at the time of *Krishna*’s birth the moon was about $7\frac{1}{2}$ days behind the sun, and it was the day of summer solstice. Therefore,

(a) Moon’s celestial longitude on 1st January, 1976 in conjunction with *Rohini* or *Aldebaran*.

(b) The moon was 22 days old $(14.75+7.25)$ since the previous new moon and taking the synodic month to have a length of 29.53 days, the moon was behind the sun approximately by:

$$\frac{360^\circ \times 22}{29.53} \text{ degrees} = 268^\circ \ 12' \ 6''.6$$

[Note: the 8th tithi after the full moon continued till the midnight and possibly till later when *Krishna* was born; therefore, moon has been taken to have traversed for 7.25 days instead of 8].

(c) Therefore, the present (1976) mean celestial longitude of the sun on the day *Krishna* was born.

$(360^\circ \text{ plus } 69^\circ \ 27' \ 12''.8, \text{ minus } 268^\circ \ 12' \ 6''.8) = 161^\circ \ 15' \ 6''.2$

Hence, the total shifting of the summer solstice till 1st. January, 1976 A.D. is roughly $= 71^\circ \ 15' \ 6''.2$, taking the Indian summer solstice to begin with the tropical celestial longitude of 90°. This lapse represents approximately 5130 years at 72 years for each degree of shifting. Thus, according to this, the period of *Krishna*’s birth comes to about 3155 B.C. and is very near the traditional date accepted by the Indians.

*Note:* Since this was the 8th tithi, 7 days passed from the full moon day. The position of moon at *Rohini* is for 9 hrs
42 m 4s Ujjain mean time on 1.1.1976. Since 25 days have been added, the summer solstice has been taken to have occurred (i.e. the sun supposed to have reached 90°) at 15 hr 42m 4s whereas, a slight reduction in the movement of the moon, which is very uneven, would bring the time period of Kṛṣṇa’s birth a little earlier.

Another verse in respect of Kṛṣṇa’s birth time is also often quoted:

अष्टमी रोहिणीयुक्ति निषाद्यै दृत्यते यदि ।
मुख्यकालः स विज्ञेयो यत्र जातो हुरि: त्वव्यम् ॥
Aṣṭamī rohiniyuktā niśārdhe dṛṣyate yadi ।
Mukhyakālaḥ sa vijñeyo yatra jāto Harih svayam ॥

This verse also gives the same time period as the data are the same. In a work on Yastiṣṭha or astrology named‘स्वामानिक्य’ (svamānikya) the following verse showing the planetary positions are quoted:

उच्चस्थाय: शांशीमोचानन्दिनयो: तमें वृषो लाभयो जीवः ।
सिंहतुलालिष्रु क्रमविन्दु पुष्पोघनोराहवः ॥
नैसिय: समयोशस्मी बुधदिनं ब्रह्मक्षेत्रमन्त्र क्षणे ।
श्रीकृष्णामानिकमुज्जेक्षणम् मृदुवाचि: परं ब्रह्म तत् ॥
Uccasthāḥ saśibhaumacandriśanayoḥ lagnamvṛso lābhago
jīvaḥ ॥
Simhatulaliṣu kramavasāṣṭ puṣoḥanorāhavah ॥
Naiśithaḥ samayoṣṭamī budhadinam brahmaṁkṛṣmatra
kṣaṇe ॥
Śrīkṛṣṇābhidhamvujekśhmambhūdāvīḥ paraṁ
brahma tath ॥

i.e., the Moon, Mars, Mercury and Saturn were exalted; the ascendant was in the sign of Taurus; and Jupiter was in the house called ‘labha’ laha, the 11th house, (in this case Pisces); in the signs Leo, Libra and Scorpio were respectively the Sun, Venus and the Node; it was midnight, the 8th tithi, Wednesday and the Moon’s Nakṣatra was Rohini (Aldebaran), in the ‘Brahma Muhurta’ brahmaṁkṛṣyāḥ, (i.e, at the ‘Rohini’ muhurtap—lord of Rohini is Prājapati or Brahma’) Śrī-Kṛṣṇa was born,
who was godhead himself. Bentley attempted to find the date of Krīṣṇa’s birth from the above data and was led to the date 7th August, 600 A.D.\textsuperscript{25}, which \textit{prima facie} is impossible.

On an examination of the above position it is found that the moon was in \textit{Rohini} or \textit{Aldebaran} and the sun was in \textit{Leo}. If the position of the sun as found in the statement obtaining in the \textit{Śakti Samgama Tantra} i.e., 160° 53’ 8” is taken into consideration, it is found to be in \textit{Leo}, near the star \textit{Purva Phalguni} or \textit{δ Leonis}. Thus, up to this there is no controversy. Further, \textit{Rohini} is the 8th \textit{muhurtha} of the night and starts from about 11.37 P.M. and lasts for about 48 minutes. Thus, the statement that Krīṣṇa was born at the middle of the night appears to be correct. In 1975, the date of Krīṣṇa’s birth fell on the 13th September. Taking this time of birth into consideration and allowing for correction, the ascendant comes to the last portion of \textit{Taurus}. Now, if the possibility of the fact that it was the day of the summer solstice is taken into account, the time of Krīṣṇa’s birth comes to the period as calculated before. Therefore, from this tradition also a date very near to the traditional date of the war, i.e., 3137 B.C. is arrived at.

(vi) The Kalhana Misra Tradition.

\textit{Kalhāna Misra}, the historian of \textit{Kāshmir}, in his \textit{Rajtarangini}\textsuperscript{26} states:

\begin{quote}
शतास्तु षष्टु क्षत्रियाधिकाष्टीके प्रस्तुते ।
कलेगतेषु भर्षितांभुवन कुरुपपाण्डवः ।
सात्सु षष्टु स्वार्धसेवयद्यके भुताले ।
कलेगतेषु वर्षांमभतुवन कुरुपपपाण्डवः ॥
\end{quote}

i.e., the \textit{Kuru Pāṇḍavas} came into existence 653 years after the \textit{Kali} era had begun. He further, states that the contemporary king of \textit{Kāshmir} at the time was \textit{Gonarda I}. This king was killed at the hands of \textit{Balarāma}, the elder brother of Krīṣṇa, while he went to attack \textit{Mathurā} as an ally of \textit{Jarāsandha}. After his death, his son \textit{Dāmodara}, ascended the throne of \textit{Kāshmir} but

\begin{footnotes}
\textsuperscript{25} Hindu Astronomy, Bentley; p. 91.
\textsuperscript{26} Rajtarangini, ch. 1. 51.
\end{footnotes}
he was also killed by Krīṣṇa when he went to fight with him near the sea where the princess of Gāṇḍhāra was having her 'svyambara sabhā'; later his posthumous son became the king of Kāśmir as Gonanda 11 and the Kurukṣetra war was fought when he was still a child. Thus, if the beginning of the traditional Kali era be taken to have started from 3101 B.C. which Kalhāna appears to have accepted, the time of the existence of the Kuru Pāṇḍavas comes to about 2448 B.C. and the period of the battle is also 36 year before that period. But Kalhāna’s statement is not complete as he could not find out the names of 35 kings after Gonanda 11 (or Gonanda as he was also called) and also their reigning periods. Therefore, he could not account for 653 years in the history of Kāśmir and hence he made the the statement that the Kuru Pāṇḍavas existed 653 years after the advent of the Kali era instead of that the Kali era began 36 years after the Kurukṣetra battle, which is the traditional period obtaining in the Purāṇas.

As already stated, the traditional period of the Kali era started when Krīṣṇa left this mortal world. Parītīra, in his 'Dynasties of Kali Age' gives the verse :

वाद देवर्षय: सप्त मधाशु विचरन्ति हि ।
तदा प्रवृत्तस्तु कलिः द्रावशा शतास्मकः ||

Yadā devarsayaḥ sapta maghaśu vicaranti hi ।
Tadā pravṛttastu kaliḥ dvādaśa śatatmatkaḥ ||

i.e. when the Great Bears were moving in the Maghaś, Kali era of 1200 years (divine years) had began. Further, Vṛddha Garga's statement that "आतन मधाशु मुराश्: शासति पृथिवि युविष्किरे नृपति" means that while king Yudhiṣṭhira was ruling in the world the Great Bears were in Magha. Again, in the Ādiparvā of Mahaṁbāhārata (5.13) it is found that the war at 'syamantap-aṅchaka' was fought between the armies of the Kurus and the

27. According to Nilamata Purana his name was Gonanda Putram: Prithivir Itihasa in Bengali, by Durgadas Lahiri, vol. 11. p. 287.
Pāṇḍavas at the juncture of Dwāpara and Kali era. In the Vīʃṇupurāṇa, there is a statement:

यदवे भगवान्ञ्जोः । अशोयातोदिव्यं द्विजः
बसुदेव कुलोमुःत । तदवे कलिरागातः
Yadaiva bhagavadviṣṇoḥ aṁśoyatodivam dvija l
Basudeva kulodbhutaḥ tadaiva kalirāgataḥ

i.e., Kali era began when Krīṣṇa left the mortal world. Again, another verse gives the exact period of the advent of the Kali era from the day when Krīṣṇa died. The verse is as under:

यस्मिन् कृषो दिव्यं यातस्तस्मि नेव तता दिने l
प्रतिपन्न कालियुगस्तस्य संखानिनिन्विचित l l
Yasmin krishno divyam yastasminneva tada dine l
Pratipanna kaliyugastasya samkhānnivodhita l l

In the Mahābhārata a statement to the effect that the Kali era is to begin shortly is found ‘‘एततू कलियुग म नाम अचिरा चत्तसूरले’’ (Etat kaliyugam nama acirāyatpravarate) and also that king Yudhiṣṭhira saw strange symptoms in the 36th year of his reign ‘‘द्वसं विपरितानि निर्मितानि गृहिष्ठिर’’ (dadarsa viparitāni nimittāni yudhiṣṭhira).

Thus, the advent of the Kali era is connected with Krīṣṇa’s death. Again, in the Mahābhārata, Gāndhārī the wife of Dhṛtrastra, is found cursing Krīṣṇa to the effect that he was to die dishonourably 36 years later. Therefore, from the above it is seen that (i) the Great Bears were in the Magha constellation at the time of Yudhiṣṭhira’s reign as well as during the period of Parikṣhita, (ii) that the Kali era had begun from the date of the death of Krīṣṇa, (iii) that this happened 36 years after the Kurukṣetra war. Thus apparently, Kalhāna could not account for a period of 653 years of the history of Kāśmīr after the advent of the Kali era and made the statement that the Kuru Pāṇḍavas existed 653 years after the advent of the Kali era.

era instead of that the \textit{Kali} era began 36 years after the the \textit{Kurukṣhetra} war. This is the traditional period of the battle as obtaining in the \textit{Purānas}. One of the reasons that can be assigned for this failure on the part of an erudite scholar like \textit{Kalhāna} is that either he was unaware or could not find out that there were three kingless periods in the history of India as commented upon by \textit{Arrian} in his \textit{‘Indica’} viz, one for 300 years, another for 120 years and as regards the third the ‘fragments’ are silent. If these periods are taken as belonging to the republic governments after the \textit{Kurukṣhetra} war, when everything was in disorder and chaos, it is found that actually, the time period for which the first republic was established is missing and the other two periods add up to 420 years. It is apparent that after the \textit{Kurukṣhetra} war the political and the social condition throughout the entire length and breadth of India had become so very unsettled that \textit{Kāhšmīr} was also not excluded from the turbulent aftereffects of the war, although the then king of \textit{Kāshmir} did not take part in the war. Thus, if the Greek historians are to be believed, the first republic or the kingless period may be taken to have lasted for 233 years considering \textit{Kalhāna’s} statement that the \textit{Kuru Pāndavas} existed 653 years after the \textit{Kali} era. It can also be taken as the first missing period mentioned by \textit{Megāsthēnes} and quoted by \textit{Arrian}.

\textit{Kalhāna Misra}, the historian of \textit{Kāhšmīr} flourished at about 1150 of our era during the reign of \textit{Jaisingh} of \textit{Kāshmir}. He refers to ‘\textit{Subrata}’ and ‘\textit{Kṣhemendra}’ as earlier historians of \textit{Kāshmir} but their compilations are not available at present. A portion of \textit{Kalhāna’s Rājtarangini} was translated into Persian entitled ‘\textit{Bahr-ul-Asmar}’ at the instance of the Mohammadan king \textit{Jainul Abedin} (1421-72) and also by \textit{Akbar} in the year 1594, after his conquest of \textit{Kāshmir}, who instructed ‘\textit{Al Badauni}’ to complete the previous translation. \textit{Emperor Jehāngīr} also had an abridged translation of the book made and this was done by \textit{Haider Mallik}. Thus, it appears that \textit{Kalhāna’s} history has all along been taken as an authentic one by both the Hindu and Muslim rulers of India. It seems, therefore, strange
that Kalhana, although accepted the traditional period Kali era to have began at 3101 B.C. made the mistake that the Kuru Pândavas were in existence 653 years after Kali era which is contradictory to all Indian traditions. The lists of the kings of Kāshmir as compiled by Kalhana are available and on close examination it appears that Kalhāna, when he could not find out the reigning periods of the first 53 kings after the Kurukṣetra war period had adopted the simple average per reign by taking the average from Gonarda IIII to Jayasingha, the of ruling periods king who was on the throne in his own period.

According to Kalhana, some of the kings who ascended the throne of Kāshmir and the periods when they did so are as under:

Jayasingha ascended in the year 1102 A.D. Sussāl in 1087 A.D. Avimanyu in 933 A.D. Suvjayavarmā in 914 A.D. Avantivarman in 830 A.D, Durlavavardhana in 574 A.D. Meghavan in 28 B.C, Praśāpāditya in 220 B.C. and Gonarda IIII in 1208 B.C. The lists of all the kings of Kāshmir and their reigning periods are available in Kalhāna’s compilation Rājarantarini. Before Gonarda IIII, up to the period of the Kurukṣetra war there were allegedly 49 reigning kings, out of which 35 could not be accounted for by Kalhāna. There were 90 kings from Gonarda IIII to Jayasingha and a total reigning period of 2310 years giving an average period of reign per king as 25 years and nine months. Taking the 49th king before the line from Gonarda III as belonging to the period of Kurukṣetra war and considering each king to have reigned for about the average number of year as calculated before, a period near about 2448 B.C., i.e. 653 years after the beginning of the traditional Kali era is arrived at. Thus, it may be concluded that, Kalhana being unable to obtain the list of the unaccounted for kings of Kāshmir numbering 35, arrived at the period of the Kuru-Pândavas by simple average calculation per king. Therefore, his statement that the Kuru-Pândavas existed 653 years after the beginning of the Kali era cannot be accepted as correct. Besides, another suspicious circumstance is that probably
he could not also account for the three kingless periods as mentioned by Megāstheneśa and quoted by Arrian.

(vii) The Aihole Inscription Tradition:

_Ravikērti_, the famous writer of the Aihole inscription of _Pulakeshin II_, states:

| तिरिसतुसु तिरिसहस्रु भारतात्त्वादवत्तिः |
| सप्ताध्यादयसु केषु गैटवब्देशु पुष्पसु |

_Trimśatḥu trisahasresu bharatādahavaditaḥ_

_Saptāvdaśatayukteṣu gateśvavdeṣu paṇchahṣu_

The above indicates that the same was installed 3735 years after the _Kurukšetra_ war. The inscription was dated 556 saka, i.e., 634 A.D. and it is a historical fact that this son of _Kṛtivarman_ ascended the throne of _Vātāpi_ as _Pulakeshin II_ in 601 A.D., and reigned till 642 A.D.5. Taking the _Śatavāhaṇa_ or the _Śalivāhana_ saka of 78 A.D. it appears that according to this inscription the battle was fought in the year 3101 B.C. As already mentioned in the inscription, the year 3101 B.C. has been mistaken as the year of the war instead of the year of the advent of the _Kali_ era, but still the traditional period of the battle and the advent of the _Kali_ era have been maintained.

In this connection, it is interesting to note that Prof: _Tytler_ (later, Lord Woodhouselee) of the Edinburg University, while giving a chronological table according to Archbishop Usher’s calculation by the Hebrew Text of the Sacred writing, has mentioned the year 3101 B.C. as the year of commencement of the Indian era of the _Kali_ yuga, thus supporting the Indian tradition of 3137 B.C. as the battle year. Further, at _Jasówi₄ir_, in _Rajputāṇa_ there is a temple dedicated to _Hanumāṇa_. In the temple there is an inscription which reads:

_श्री युविन्दरस्व व्रजात्सानो हिंदूसानाव्यासनात्त वर्षवृद्धि ४८६५ (४८९८)
गते विन्दुमार्क्क राजवृत्त संवत १८५६ (१८५४) सालिबाह्य ग्रत्ताट शके
_१७१६ (१७१९) उत्तरावस गते_ ॥

32. The Early History of India, V. A. Smith, p. 425, p. 436.
Sri Yudhiṣṭhirasya ajātsatra simhasanāddhaśanāt varṣavrinda (4898) gate Vikramarka rajyat Saṃvat (1854) Śalivahaṇa Śakat Śake (1719) Uttarāyaṇa gate II

i.e., the temple was consecrated in the year ending 4898 after the accession to the throne of Yudhiṣṭhira, who was devoid of enemies, and after king Vikramaśa era of 1858 and after the elapse of the year 1719 of the Śalivāhaṇa saka, and at the end of Uttarāyaṇa. The sakābāda started from 78 A. D. Thus, the inscription was put in 1796 A. D. From this, it appears that Yudhiṣṭhiraśa saka started in the year 3102 B. C. i.e., at the beginning of the Kali era. The Brahmasphuta Siddhānta also echoes the same view:

“गोकाङ्कुभु: शकान्तब्धोः” Gośaṅkagunanah Śakāntaibadhah

The Jyotirmārkanda too states the same figure:

“शाके न वासेरुऽक्राश्च युक्ताः कलेश: महावावधगुगायस्व” Śake na vāgendu kṛṣanu yuktāh kaleś bhavanyavdaguṇo yasya

Thus from an analysis of the aforesaid traditions, the date of the Kurukṣetra war and the beginning of the Kali era (taking the intermediate period as 36 years, i.e., up to the time of Kṛṣṇa’s death) can be summarised as under:

**Indian Traditions:**

1. Traditional date: 3137 B.C.
2. Aryābhatta (a) 3114 B.C.
   (b) 3101 B.C.
3. Vṛiddha Garga 3137 B.C. including other dates.
4. Saptarṣhi Tradition: 2434 B.C.
5. Tradition of Kṛṣṇa’s birth: 3155 B.C.
6. Kalhāna Mishra Tradition: 2448 B.C.
7. Bhāskara Tradition: 3137 B.C.
8. Aihole inscription: 3101 B.C.
9. Prof: Tytler: 3137 B.C.
10. Jaswālmir temple inscription: 3137 B.C.
11. Brahmasphuta Siddhānta: 3137 B.C.
12. Jyotirmārkanda: 3137 B.C.
Therefore, from the *Kurukṣetra* war traditions, various dates ranging from about 2400 B.C. to 3137 B.C. are obtained. From the chart given above, it appears that except the *Kalhānā Miśra* tradition, all the others range between 3101 B.C. and 3137 B.C. Since, it has been shown before that *Kalhāna* was incorrect in placing the period of the *Kuru-Pândavas*, and that he was unable to find out 35 kings of *Kāśmīr* of the early period, his statement may be kept aside for later considerations. From the other traditions, a date near about 3137 B.C. is arrived at for the war period and it seems that this date is more preferable to 3101 B.C. and should be seriously taken into consideration for acceptance. Even if this period or the period calculated by *Kalhāna* is accepted, the myth of the *Aryan* invasion at about 1500 B.C. completely explodes.
CHAPTER VI

THE DATE OF KURUKSHETRA WAR

(C) PURANIC

Another body of evidences other than and in addition to the aforesaid traditions are the information available in the Purāṇas. Before going into Puranic details, it would be expedient to detail a list of kings of 'Indraprastha' or modern 'Delhi' collected by Mr. Phani Bhusan Dev from two fortnightly papers entitled 'Hariśchandra Chandrikā' and 'Mohan Chandrika' published from Udaipur and Chitorgarh and other collections of Swami Dayānanda Saraswati. According to him the kings, who adorned the throne of Indraprastha and their reigning periods are given below:

<table>
<thead>
<tr>
<th>Name of the king</th>
<th>reigning periods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>years</td>
</tr>
<tr>
<td>1. Yudhiṣṭhira</td>
<td>36</td>
</tr>
<tr>
<td>2. Parikṣhita</td>
<td>60</td>
</tr>
<tr>
<td>3. Janmejaya</td>
<td>84</td>
</tr>
<tr>
<td>4. Asvamedha</td>
<td>82</td>
</tr>
<tr>
<td>5. Rāma 11</td>
<td>88</td>
</tr>
<tr>
<td>6. Chatramala</td>
<td>81</td>
</tr>
<tr>
<td>7. Chitraratha</td>
<td>75</td>
</tr>
<tr>
<td>8. Dustasaila</td>
<td>75</td>
</tr>
<tr>
<td>9. Ugrasena</td>
<td>78</td>
</tr>
<tr>
<td>10. Bhubanpati</td>
<td>69</td>
</tr>
<tr>
<td>11. Ranajita</td>
<td>65</td>
</tr>
<tr>
<td>12. Rīkshaka</td>
<td>64</td>
</tr>
<tr>
<td>13. Sukkhadeva</td>
<td>62</td>
</tr>
<tr>
<td>14. Naraharideva</td>
<td>51</td>
</tr>
<tr>
<td>15. Suchiratha</td>
<td>42</td>
</tr>
<tr>
<td>16. Surasena 11</td>
<td>58</td>
</tr>
<tr>
<td>17. Parvatasenā</td>
<td>55</td>
</tr>
</tbody>
</table>

1. Paraloka Samikshan ; (Bengali), P. B. Dev, pp. 211-220.
<table>
<thead>
<tr>
<th>Name of the kings</th>
<th>reigning periods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>years</td>
</tr>
<tr>
<td>18. Medhābi</td>
<td>52</td>
</tr>
<tr>
<td>19. Sonāchira</td>
<td>50</td>
</tr>
<tr>
<td>20. Bhīmadeva</td>
<td>47</td>
</tr>
<tr>
<td>21. Nriharideva</td>
<td>45</td>
</tr>
<tr>
<td>22. Purnamala</td>
<td>44</td>
</tr>
<tr>
<td>23. Karadavi</td>
<td>44</td>
</tr>
<tr>
<td>24. Palanmika</td>
<td>50</td>
</tr>
<tr>
<td>25. Udayapāla</td>
<td>38</td>
</tr>
<tr>
<td>26. Duvanmala</td>
<td>40</td>
</tr>
<tr>
<td>27. Dāmata</td>
<td>32</td>
</tr>
<tr>
<td>28. Bhimapāla</td>
<td>58</td>
</tr>
<tr>
<td>29. Kṣhemaka</td>
<td>48</td>
</tr>
</tbody>
</table>

1692 3 29

This Kṣhemaka was allegedly assassinated by his Prime Minister Bisrava and his dynasty of 14 generations reigned for 500 years 3 months and 17 days as under:

<table>
<thead>
<tr>
<th>Name of the kings</th>
<th>years</th>
<th>months</th>
<th>days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bisrava</td>
<td>17</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>2. Puraseni</td>
<td>42</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>3. Biraseni</td>
<td>52</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>4. Ānangasayi</td>
<td>47</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td>5. Harijita</td>
<td>35</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>6. Paramaseni</td>
<td>44</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>7. Sukpatala</td>
<td>30</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>8. Kadruta</td>
<td>42</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>9. Sajja</td>
<td>32</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>10. Amarachura</td>
<td>27</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>11. Amipala</td>
<td>22</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>12. Daśarakha</td>
<td>25</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>13. Vīrsala</td>
<td>31</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>14. Vīrsala Sen</td>
<td>47</td>
<td>0</td>
<td>14</td>
</tr>
</tbody>
</table>

500 0 17
Virmahā, the Prime Minister of Virsal Sen assassinated king Virsal Sen and Virmahā's dynasty ruled at Indraprastha for 16 generations totalling 445 years 5 months and 3 days:

<table>
<thead>
<tr>
<th>Name of the kings</th>
<th>years</th>
<th>months</th>
<th>days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Virmahā</td>
<td>35</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>2. Ajit Sing</td>
<td>27</td>
<td>7</td>
<td>29</td>
</tr>
<tr>
<td>3. Sarvaḍatta</td>
<td>28</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>4. Vubanpati</td>
<td>15</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>5. Vrṣenā</td>
<td>21</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>6. Mahipāla</td>
<td>40</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>7. Satrupāla</td>
<td>26</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>8. Sangharāja</td>
<td>17</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>9. Tejpala</td>
<td>28</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>10. Mankchandra</td>
<td>37</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>11. Kāmāseni</td>
<td>42</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>12. Satrumardana</td>
<td>8</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>13. Jivanlokā</td>
<td>28</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>14. Harirava</td>
<td>26</td>
<td>10</td>
<td>29</td>
</tr>
<tr>
<td>15. Virasena 11</td>
<td>35</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>16. Adityaketu</td>
<td>23</td>
<td>11</td>
<td>13</td>
</tr>
</tbody>
</table>

445  5   3

Dhundhur of Prayāga killed king Adityaketu and his dynasty reigned for 9 generations totalling 374 years 11 months and 26 days as under:

<table>
<thead>
<tr>
<th>Name of the kings</th>
<th>years</th>
<th>months</th>
<th>days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dhundhura</td>
<td>42</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>2. Maharṣhi</td>
<td>41</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>3. Sanāracchi</td>
<td>50</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>4. Mahāyuddha</td>
<td>30</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>5. Durmātha</td>
<td>28</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>6. Jivanraja</td>
<td>45</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>7. Rudrasena</td>
<td>47</td>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td>8. Arālāka</td>
<td>52</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>9. Rajāpāla</td>
<td>36</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

374  11  26
Rajāpāla was assassinated by Mahānpāla and reigned for only one generation totalling 14 years. His dynasty did not reign for any further period. Mahānpāla was attacked by king Vikramāditya of Avantikā (Ujjain) and his generation reigned for 93 years. Apparently this period is related to the Vikrama Samvata of 57 B.C. After this the Śalībāhaṇa or the Satavāhaṇa dynasty reigned for 275 years; the details of this dynasty is not available from the records collected by Swami Dayānanda Saraswati. Vikramāditya 11, the king of this dynasty was assassinated by Samudrapāla and his dynasty reigned for 16 generations totalling 372 years 4 months and 27 days, as under:

<table>
<thead>
<tr>
<th>Name of the kings</th>
<th>years</th>
<th>months</th>
<th>days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Samudrapāla</td>
<td>54</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>2. Chandrapāla</td>
<td>36</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>3. Sahayapāla</td>
<td>11</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>4. Devapāla</td>
<td>27</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>5. Narsinghpāla</td>
<td>18</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>6. Somapāla</td>
<td>27</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>7. Raghupāla</td>
<td>22</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>8. Govindapāla</td>
<td>27</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>9. Amritapāla</td>
<td>36</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>10. Balipāla</td>
<td>12</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>11. Mahipāla</td>
<td>13</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>22. Haripāla</td>
<td>14</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>13. Bhīmapāla</td>
<td>12</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>14. Madanpāla</td>
<td>17</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>15. Karmapāla</td>
<td>16</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>16. Vikramapāla</td>
<td>24</td>
<td>11</td>
<td>13</td>
</tr>
</tbody>
</table>

372 4 27

Mulukchānd, a ruler from the west, attacked Vikramapāla, defeated him and found a dynasty which continued for 10 generations and totalled 191 years and 16 days as under:

<table>
<thead>
<tr>
<th>Name of the kings</th>
<th>years</th>
<th>months</th>
<th>days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mulukchānd</td>
<td>54</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>2. Vikramchānd</td>
<td>12</td>
<td>7</td>
<td>12</td>
</tr>
</tbody>
</table>
**Name of the kings** | **years** | **months** | **days**
--- | --- | --- | ---
3. Mankchānd | 10 | 0 | 5
4. Ramchānd | 13 | 11 | 8
5. Harichānd | 14 | 9 | 24
6. Kalyanchānd | 10 | 5 | 4
7. Bhimachānd | 16 | 2 | 9
8. Lavchānd | 26 | 2 | 22
9. Govindchānd | 31 | 7 | 12
10. Padmāvati | 1 | 0 | 0

Total: 191 0 16

Queen Padmāvati, the widow of Govindchānd died without leaving any heir. The ministers put Hariprema on the throne of Indraprastha and his dynasty of 4 generations reigned for 50 years and 21 days as under:

**Name of the kings** | **years** | **months** | **days**
--- | --- | --- | ---
1. Hariprema | 7 | 5 | 16
2. Govindaprema | 20 | 2 | 8
3. Gopālprema | 15 | 7 | 28
4. Mahābāhu | 6 | 8 | 29

Total: 50 0 21

King Mahābāhu left his throne and went to the forest for performing ‘Tapasyā’ and King Adhisena of Bengal occupied the throne of Indraprastha. He and his descendants reigned for 12 generations totalling 191 years 11 months and 2 days as under:

**Name of the kings** | **years** | **months** | **days**
--- | --- | --- | ---
1. Adhisena | 18 | 5 | 21
2. Bilam Sen | 12 | 4 | 2
3. Keshab Sen | 15 | 7 | 12
4. Mādhab Sen | 12 | 4 | 2
5. Mayur Sen | 20 | 11 | 27
6. Bhām Sen | 5 | 10 | 9
7. Kalyan Sen | 4 | 8 | 21
8. Hari Sen | 12 | 0 | 15
### The Date of Kurukshetra War

<table>
<thead>
<tr>
<th>Name of the kings</th>
<th>years</th>
<th>months</th>
<th>days</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Kṣhema Sen</td>
<td>8</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>10. Nārāyan Sen</td>
<td>2</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>11. Laxmi Sen</td>
<td>26</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>12. Dāmodar Sen</td>
<td>11</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>191</td>
<td>11</td>
<td>2</td>
</tr>
</tbody>
</table>

*Dāmodar Sen* was a tyrant. His minister, *Dīpa Singha*, killed him and ascended the throne. He and his descendants reigned for 6 generations totalling 107 years 6 months and 12 days as under:

<table>
<thead>
<tr>
<th>Name of the kings</th>
<th>years</th>
<th>months</th>
<th>days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dipasingha</td>
<td>17</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>2. Rājsingha</td>
<td>14</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>3. Ranasingha</td>
<td>9</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>4. Narasingha</td>
<td>45</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>5. Harisingha</td>
<td>13</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>6. Jivansingha</td>
<td>8</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>107</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

Prithvirāj Chowhān attacked *Jivan Singh* and occupied the throne of *Indraprastha* and reigned for 12 years 2 months and 19 days. Prithvirāj occupied the throne in the year 1241 Samvat corresponding to 1184 A.D. He was defeated and killed by *Siābuddīn Ghūrī* in the year 1192 A.D. and Kutubuddīn, as his representative, occupied the throne of Delhi for 14 years up to 1206 A.D. After this, the following dynasties occupied the Sultanate of Delhi:

1. The slave Dynasty 1206 — 1290 A.D. 84 yrs.
2. Khalji dynasty 1290 — 1320 A.D. 30 yrs.
3. Tughlak dynasty 1320 — 1413 A.D. 93 yrs.
5. Lodi dynasty 1451 — 1526 A.D. 75 yrs.
7. Sura dynasty 1540 — 1555 A.D. 16 yrs.
8. The Great Mughuls 1556 — 1858 A.D. 303 yrs.
Summarising the above it appears that:

From Yudhisthira to Mahânpala — 3027 yerrs 0 m 5 d
Vikramâditya to Prithviraj — 1253 ,, 2 ,, 7 d

\[
\begin{array}{ccc}
4280 &, & 2 ,, 12 d \\
\end{array}
\]

Kutubuddin Aibak to modern period
(1976)— 779 ,, 0 ,, 0 d

5059 ,, 2 ,, 12 d

From the above account, it seems that the Kurukshetra war was fought in the year 3084 B.C. and apparently, there is a difference of 53 years from the traditional date of 3137 B.C. It is also interesting to note that from Yudhisthira to Prithviraj Chowhan, 119 kings reigned at Indraprastha for 4055 years giving an average reign of 34 years and 1 month per king.

It now becomes necessary to find out which of the Purânas contain the oldest strata in them. The more relevant information are available from the following Purânas:

(i) *The Matsya Purâna*,
(ii) *The Vâyu Purâna*,
(iii) *The Viśnu Purâna*, and
(iv) *The Bhâgavata Purâna*.

From the internal evidences of the positions of the equinoxes and the solstices and from other astronomic indications it appears that the *Matsya Purâna* has the oldest Puranic stratum, then comes the *Vâyu* in the same respect. The *Matsya Purâna* states that the Sun reached the southermost limit in *Maghâ* and the northernmost limit in *Sravanâ*. The same position is also shown in the *Yajusa Jyautisha* and this position was true for about 1400 B.C. The statement is also

2. Anc. Ind. Chr, Sengupta, p. 47.
4. Yajusa Jyautisa, 7:

श्रविष्ठ दक्षिणक्ष्यु माघाव्यावह तदाद्वादुपुरावय
Prapadyete śravisthādau suryāçandraṃasaśāvaduk
Sāpārdher dakṣiṇārkāstumāghaśravaṇayāḥsadā
found in the *Vayu Purāṇa*⁵ together with the definite statement that of the *Nakṣhtras*, the first was the *Sravaśītā*⁶. Further, it states that the constellations begin with the *Nakṣatra Sravana*. The present Mahābārata recension was at about 400 B.C., and both the *Purāṇas* have been referred to in the present recension of the *Mahābhārata*.⁷ Thus, from the above it appears that the *Matsya Purāṇa* has the oldest *Purānic* stratum and then comes the *Vāyu Purāṇa*. According to *Pārgiter* also⁸, between the *Vāyu Purāṇa* and the *Matsya Purāṇa*, the *Mātysya* has the oldest version and *Vāyu* the next as far as the dynastic lists of the *Kali Yuga* are concerned. According to *V. A. Smith*⁹, the *Matsya* version is the earliest and more comprehensive whereas the *Viṣṇu* and the *Bhāgabata Purāṇas* are later condensed recensions. He further adds that the *Purāṇas* in some or other shape were already authoritative in the 4th century B.C. and the author of the *Arthasāstra* directs the king to spend his afternoons in the study of *'Itihāsa'* (history) which embodies the *Purāṇas* also. Further in the *Bṛhad Arāṇayaka Upaniṣhada*, the *Purāṇas* have a distinct place amongst various literatures¹⁰; and the *Purāṇas* and the *Gāthās* have also been mentioned in the *Asvālayana Grihya Sutras*¹¹. Hence, it can be deduced that the *Purāṇas* in some form or other were in existence from a very early period, though some of the *Purāṇas*, as available now, are likely to contain many modern additions and interpolations.

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7. *Mahabharata*, Vana, 191, 16; Vana, 187, 55; Aswamedha, 44.
8. *Dynasties of Kali Age*, Pārgiter, Int. p. xx
10. *Bṛhad. Ar. iv. 5.11.
11. *As, Gr. Su. 3.3.1.*
Certain references obtaining in the Vishnu Purana and the Bhagabata Purana renders it impossible to place these before a date prior to 4th century of our era, but still, the existence of these Purāṇas prior to this date can not be doubted. Considering the above, more reliance may be placed on the Matsya Purana for the consideration of the dynastic lists of the Kali era which all the Purāṇas are enjoined to give as a rule.

All the Purāṇas, as enjoined contain the dynastic lists, i.e. the reigning periods of the various kings and their dynasties. These lists, apparently, seem to record a continuous list of the kings and their reigns from the Kurukṣetra war up to the period of the extinction of the Andhras, and generally deal with the Magadhan dynasties, the first of which was the Bṛhadṛatha dynasty. The account given in the Matsya Purana is quoted below:

अत उत्सर्ग प्रबल्यायमि मागधाये बुधप्रणाः ||
जरासन्धस्ये बले सहदेवस्ये नृपतः ||
अतता वर्तमानात्च भविष्यात्च तथा पुनः ||
प्राधन्यत: प्रबल्यायमि गदलो मे निवोधत ||

Ata Urdvam pravakṣyāmi māgadhā ye vṛhadṛathāḥ ||
Jarāsandhasya ye vamśe sahadevānvye nṛpāḥ ||
Atītā vartamānāśca bhaviṣyāśca tathā punah ||
Prādhānyataḥ pravakṣyāmi gadato me nivodhata ||

i.e. Henceforward I will tell about the Bṛhadṛathas of Magadh who are kings in Sahadeva’s lineage in the family of Jarāsandha about those past, those existing and about those who will exist later; I will declare the prominent amongst them; listen as I speak about them.

Thus according to the composer of the Purāṇa the lists given in the text are incomplete since he is to “declare the prominent amongst them.” Therefore, these can not be depended upon for finding out the correct time period of the Kurukṣetra war. The Matsya text is as under:

शंग्रामे भारते बुटे सहसदेबे निमानिते ॥
शोभादरस्व दायावी राजामृत न गिरिजरे ॥
पञ्चाशालं तथापौरी च समा राज्य मकारयत ॥
शूरतमालामुक्त: पषि समास्तस्सात्देयसभवत ॥
भयुतमुस्तु पड़िविंशदु राज्यं वर्षाणकारयत ॥
चत्वारिंशतः समास्त स्थिरितो दिवं गत: ॥
पञ्चाशालं समापदः च सुधाकः प्राप्तवान् महीम ॥
अयोविंशदु बृहुतकम्मो राज्यं वर्षाणकारयत ॥
सेनाजितु समस्यात्तथंसूका पञ्चाशालं महीम ॥
शूरत्मालावस्तु वर्षाणि चत्वारिंशादु भविष्यति ॥
महाबलो महाबारे महाबुद्धि पराभवः ॥
अष्टविंशति वर्षाणि मही प्रस्थिति वै विभृतः ॥
अष्ट पञ्चाशालं चावानार राज्ये रथाप्रयति व सुधिच: ॥
अष्टविंशति समा राजा क्रेषो मोक्षयति व महीम ॥
सुभ्रतस्तु चतुष्पदिः राज्यं प्राप्तवान् बीर्यवान् ॥
पञ्चारिंशति वर्षाणि सुतेन्द्रो भोक्यते महीम ॥
भोक्यस्ते निरूपित्वेषामपमक्षार्थताः समा: ॥
अष्टविंशतू समा राज्यमु नितेन्द्रो भोक्यते तत: ॥
चत्वारिंशतू तथापौरी दृष्टेनन्दो भविष्यति ॥
वर्षकांशतू वर्षाणि महीनेने प्रकाशते ॥
द्वारिंशतू समा राजा सुध्वस्तु भविष्यति ॥
चत्वारिंशतू समा राजा सुनेत्रो भोक्यते तत: ॥
सत्यजितु पुर्विको राजा ब्राह्मणविभोक्यते समा: ॥
प्रायोमां बिशब्रजचारिपि पञ्चविंशदु भविष्यति ॥
रघुव्यस्त् वर्षाणि पञ्चाशालं प्राप्तवान् महीम ॥

Samgrame bhārate vṛtte Sahadeva nipātīte ।
Somādhistasya dāyādo rājālbhut sa girivraje ॥
Pañcāsaṭamaṁ tathālaṣṭau ca sama rājyamakāryat ।
Śrutasravāscatubhastim samāstasyaṇdayēbhavat ॥
Ajutāyustu saḍavimśad rājyāṁ varṣāṇyakārayat ।
Catvārīṁsat samāstasya Niramitra divam gataḥ ॥
Pañcāsaṭamaṁ sama sat ca Sukṣatraḥ praṇaptavan mahīm ॥
when the Bhārata battle took place and Sahadeva was killed, his son Somādhi became the king of Girtvraja; he reigned for 58 years, and in his lineage Srutāra ruled for 64 years; Ayutāus reigned for 26 years and after 40 years of reign king Niramitra died; Sukṣatra reigned over the earth for 56 years, Bhṛdikarmā reigned for 23 years and Senājit died after enjoying the world for 50 years, then Śrutaṇjay will reign for 40 years and he will gain great power, intelligence and strength; Vibhu will reign for 28 years, Suchi for 58 years and Kṣhema will enjoy the earth for 28 years; then Suvara will reign for 64 years, and and Sunetra for 35 years; Nivrīti will reign for 58 years and Trinetrā for 28 years; Dṛḍhasena will reign for 48 years, Mahinetrā for 33 years and Suchala will be the king for 32 years. Sunetra will reign for 40 years, Satyajit will enjoy the earth for 83 years, Viśvajit for 25 years and then Rupuṇjaya will be the king for 50 years. Then the Purāṇa goes on and states that these sixteen kings will belong to the Bhṛdhṛatha.
dynasty, and the life span of each of these kings will exceed twenty years and the dynasty will reign for 700 years¹³.

Apparently, therefore, the compiler of the *Purāṇa* has only included the names of the kings who reigned for 20 years or more and not in sequence of proper succession leaving a gap in the list of the kings which is impossible to fill up now. From the above list of 22 kings, who had already reigned and would reign, the total period is found to be 967 years as under:

<table>
<thead>
<tr>
<th>Past kings</th>
<th>Years of reign</th>
<th>Present &amp; future kings</th>
<th>Years of reign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somādhī</td>
<td>58</td>
<td>Senājit</td>
<td>50</td>
</tr>
<tr>
<td>Śrutaśrava</td>
<td>64</td>
<td>Śrutaṅjaya</td>
<td>40</td>
</tr>
<tr>
<td>Ayutāu</td>
<td>26</td>
<td>Vibhu</td>
<td>28</td>
</tr>
<tr>
<td>Nīramrīta</td>
<td>40</td>
<td>Suchi</td>
<td>58</td>
</tr>
<tr>
<td>Sukṛhatra</td>
<td>56</td>
<td>Kṣhema</td>
<td>28</td>
</tr>
<tr>
<td>Brhatkarma</td>
<td>23</td>
<td>Suvrata</td>
<td>64</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>267</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Present &amp; future kings</th>
<th>Years of reign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunetra 1</td>
<td>35</td>
</tr>
<tr>
<td>Nivṛti</td>
<td>58</td>
</tr>
<tr>
<td>Trinetra</td>
<td>28</td>
</tr>
<tr>
<td>Dhṛṣṭena</td>
<td>48</td>
</tr>
<tr>
<td>Mahīnetra</td>
<td>33</td>
</tr>
<tr>
<td>Suchala</td>
<td>32</td>
</tr>
<tr>
<td>Sunetra 11</td>
<td>40</td>
</tr>
<tr>
<td>Satyajit</td>
<td>83</td>
</tr>
<tr>
<td>Viṣvajit</td>
<td>25</td>
</tr>
<tr>
<td>Ripuṅjay</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>700</strong></td>
</tr>
</tbody>
</table>

¹³. योढ़कीते तुपासया भवितारो बृहद्या: ।
बयोबिंशाधिकं तेषां राज्यं च शतसप्तकम् ॥
Soraśaite nrpājñayā bhavitāro Brḥdrathāḥ l
Vayovimśādhikam teṣam rājyaṁ ca śatasaptakam l
Although it has been stated that there will be 32 kings, who had already reigned and will reign\(^\text{14}\), only 22 kings having a total reigning period of 967 years are found. From this, it appears that the remaining 10 kings reigned for 33 years and their names and reigning periods have not been included in the Purānic list, probably because each of these kings reigned for less than 20 years. In the Viṣṇupurāṇa also the period of the Brhadrathas has been shown as 1000 years. After the Brhadratha, the Prodyatas of Avanti\(^\text{15}\) became the rulers of India and reigned for 173 years according to Matsya Purāṇa and 138 years according to Vayu Purāṇa and then came the Śisunāgas of Magadha\(^\text{16}\). The Śisunāgas ruled for 360 years and then ruled the Nandas. The last king of the Śisunāga dynasty was succeeded by Mahāpadma Nanda, the founder of the Nanda dynasty, and according to the Purāṇas the nine Nandas ruled for 100 years.

14. द्वारिष्ठी नूपाणि ते मनवतारो बृहद्द्राघः ॥
पूजं वर्षसहस्रं वै ते साम्य भविष्यति ॥
Dvātrimśati nṛpāhyete bhavītāro Brhadrathāḥ ॥
Pūrṇam varṣasahasram vai teṣam rājaṃ bhaviṣyati ॥

15. बृहद्रथेच्छविते तेशु बृहत्तरस्य वैभवस्यन्ति ॥
पुलिक: स्वामिनं हṛ्वा स्वपुत्रमविषये वतिह ॥
Brhadrathēśvatīteṣu vātihotreśvavantīṣu ॥
Puliкаḥ svāminam hatvā svaputraṁbhīṣekṣyati ॥
Different reading of पुलिक: is पुलिक । According to Viṣṇu Purāṇa statement Pulika was the last minister of Brhadratha Rīpuṇjaya.

16. शतानि श्रीणि वस्त्रीणि वषेष्वरस्याष्टिकाणिन ॥
विष्णुनाथान भविष्यति राजाश्र भवास्तवः ॥
Śatāni trīni varṣāni ṣaṭivaśāḥdhikāni ca ॥
Śiṣunāgā bhaviṣyanti rājāno kṣatrandavaḥ ॥
i, e Śiṣunāgaa were the friends of the kṣatriyas and will reign for 360 years.
Summarising the reigns of the various dynasties as quoted above it is seen that:

(i) Brhadhrathas ruled for — 967 years
(ii) Prodyotas ruled for — 173 years
(iii) Siṣunāgas ruled for — 360 years
(iv) Nandas ruled for — 100 years

1600 years

If, however, the period of the Brhadhrathas is taken to be 1000 years, the total period elapsed from the Kurukṣetra war up to the last of the Nandas comes to 1633 years. And if the period of the last king of the Nandas is taken to be contemporary with the invasion of Alexander the Great at 323 B.C., the Kurukṣetra war seems to have been fought at about 1923 B.C. The time lag between the period from Parikṣhit to the Nandas has been shown differently in different Purāṇas, but the correct version appears to be 'from the birth of Parikṣhit to the coronation of the Nanda; the interval should be known to be 1500 years!'

17. याब्दत् परीक्षितो जन्म पार्कशन्धाधिक्षेत्रम्
एवं तथाहल तु ज्ञेयं पञ्चचशाहोतरम्
Yavat Parikṣito janma javannandābhiścanaṁ
evaṃ varṣasasraṁ tu jñeyaṁ pañcaśatottaram

The variations in the reading are "ज्ञेयं पञ्चचशाहोतरम् (ज्ञेयम् pañcadaśottaram)" "शतं पञ्चचशाहोतरम् (शतम् pañcadaśottaram)" "ज्ञेयं पञ्चाशुदुतरम् (ज्ञेयम् pañcośaduttaram)" and "ज्ञेयं पञ्चचशाहोतरम् (ज्ञेयम् pañcaśatottaram).

The next stanza runs thus:
पुलोमास्तु तथान्नास्तु महायान्तरे पुनः
अन्तरं च शताश्चैव पञ्चिन्ततु समास्तथा
ताब्दत् कालान्तरं महायम् अन्नश्रान्तायाः प्रकीर्तिताः
Pulomasata tathandhāstu mahāpadmāntare punaḥ
Antaran ca satānyṣṭou śatāśṭattu samāstathā
tavat kalāntaram bhavyam Andhrāntadyāḥ prakīrtitāḥ
and this figure agrees with the figure given in the Matsya Purāṇa. The last of the Nanda kings was stated to have been deposed by Chandragupta Maurya with the help of his Brahmin adviser ‘who is variously named Chānakyā, Kautilya or Viṣṇugupta’¹⁸. The nine Nandas are stated to have ruled for 100 years when Maurya dynasty was founded by Chandragupta, who undoubtedly was a contemporary of Alexander the Great; and ‘his ascension to the throne of Magadha may be dated with practical certainty in the year 322 B.C.’¹⁹. As already stated the period of the Kurukṣetra war comes to 1922 B.C. or 1955 B.C. from the above account; but this is also incomplete inasmuch as the Matsya Purāṇa, which contains the oldest stratum, categorically states that the list of kings of the Bṛhadraṭha dynasty has been compiled taking only the notable kings; the fact that there were three kingless periods, two for 420 years and the third for an unknown period or that Kalhana could not account for 653 years in the history of Kāśmir was probably either not known or not considered by the Purāṇa compilers. If these unknown periods are taken into consideration, and it seems reasonable to do so in view of the great chaos in the country after the Kurukṣetra war, when it was not

This means that the interval between Mahāpadma and the extinction of the Andhras was 836 years but according to the dynastic list the total duration comes to 854 years as under:

<table>
<thead>
<tr>
<th>Dynasty</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nandas</td>
<td>100 years</td>
</tr>
<tr>
<td>Mauryas</td>
<td>137</td>
</tr>
<tr>
<td>Śuṅgas</td>
<td>112</td>
</tr>
<tr>
<td>Kapvatas</td>
<td>45</td>
</tr>
<tr>
<td>Andhras</td>
<td>460</td>
</tr>
</tbody>
</table>

854 years

According to the Viṣṇu and Bhāgavata Purāṇas the total comes to 850 years.

18. The Early Hist. of India; Smith; p. 42.
19. ibid; p. 43.
known ‘who was king who was not king’ as it happened at the end of the dynasty of Agade (Akkâd), the period of the great battle goes back another 653 years and the period comes to 2575 B.C. or 2608 B.C. plus the unaccounted reigning periods of the kings not mentioned by the compiler of the Matsya Purâna.

A slightly different version is, however, obtained from the Jaina texts\textsuperscript{20} which state that on the day when Mahâvira died, Pulaka was coronated at Avanti; Pulaka reigned for 60 years and then nine kings of the Nanda dynasty reigned for 155 years; afterwards came the Mauryas who remained on the throne for 108 years making room for Puspamitra, who reigned for 30 years. Bâlamitra and Bhanumitra were on the throne for 60 years and then Nalavhana or Navabahana (Nahavahana or Nabhovahana) reigned for 40 years; Gardhavalla was the king

\textsuperscript{20} Prithilvir Itihasa (Bengali), vol. vi, p. 248.

\begin{verse}
Jaṁ rayaṇiṁ siddhi gao arahaṁ tithaṁ karō Mahâviro I
Taṁ rayaṇimavamti abhisitto pālo rāya II
Pâlagaraṇṇo sâṭti paṇa paṇa sayavimāṇa nandaṇṇaṁ I
Murtiṇaṁ atvasayaṁ tīsa paṇa pusa mittaṇṇaṁ II
Valavitta bhanumittā satvicattāya homti narasēṇe I
Gaddava sayamegaṁ paṇa padivaṇṇoto sago rāya II
Paṃcaya māṣā paṃcaya vāsā chace bhohumti vāsasaya I
Parinivvayaśsa arhoto upaṇṇo sago rāya II

(Titthugāliā'Payāṇa)
for 13 years and then the Śaka kings reigned for 14 years. If this Pulaka mentioned by the Jaina authors is identified with the Prodyotas of Avanti, then he was coronated in the year 527 B.C., i.e., in the year when Mahāvira died. To this, if the Bṛhadraṭha period of 967 (or 1000) years is added, the period of the Kurukṣetra war comes either to 1494 B.C. or 1527 B.C. plus the periods of the minor kings. This period also does not take into consideration the three kingless periods mentioned by Megasthenes and quoted by Arrian, or the period of 653 years which Kalhana could not account for.


---

<table>
<thead>
<tr>
<th>Jaina Text: Tirthadādhar Prakīrnaka.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jaṅ rayāṇim kālagao arihā titthamkarō Mahāvīro</td>
</tr>
<tr>
<td>Tam rayāṇim avamātvāi ahisitā pālago rāyā</td>
</tr>
<tr>
<td>Satvi pālago raṅge papa paṅga sayamūt hoī pāmḍānaṃ</td>
</tr>
<tr>
<td>Atvasayaṃ muryāṇaṃ tisam cia Pussamattassa</td>
</tr>
<tr>
<td>Valamitta Bhānumittā satvivarasāṇi catta naravahāṇi</td>
</tr>
<tr>
<td>Taha Gaddabhillarajjam terasa varisā samsas cau</td>
</tr>
</tbody>
</table>

---

From the above two Jaina accounts the time table from Mahāvira Nirvana up to the period of the Saka kings is as under:

| Mahāvira Nirvana | 527 B.C. |
| Pulaka | 60 years | 527 — 467 B.C. |
| Nanda kings | 155 | — 467 — 312 |
| Maurya kings | 108 | — 312 — 204 |
| Puspmaitra | 30 | — 204 — 174 |
| Valamitta & Bhanumitra | 60 | — 174 — 114 |
| Nalavahana or Navavahana | 40 | — 114 — 74 |
| Gardavilla | 13 | — 74 — 31 |
| Saka kings | 61 B.C. |
Thus, summarising the Purānic dynasty lists, it is found that:

(a) interval between Parikṣhit and Nanda — 1500 years
   duration of Nanda dynasty — 100 "
   Candragupta Maurya — 321 B.C — 321 "
   — 1921 B.C.

(b) Bṛhadratha dynasty — 1000 years
   Prodyotas of Avanti — 173 "
   Śiśunāgas of Magadha — 360 "
   Nanda dynasty — 100 "
   Candragupta Maurya — 321 B.C.
   — 1954 B.C.

There is, however, a difference of 33 years which is due to taking 1000 years as the reigning period of the Bṛhadratha dynasty in (b) above instead of 967 years which appears to have been accepted in the Nanda—Parikṣhita difference in the Purānas. None of these, however, account for the periods of the reign of the minor kings of the Bṛhadratha dynasty or the kingless periods mentioned by Arrian in his ‘Fragments of Indica’ in three spells of 300, 120 plus unknown number of years or take into consideration the statement of Kalhāna Mitra that the Kurukṣetra war happened 653 years after the Kali era had began in spite of the Purānic tradition that Kali age started from the day when Kṛṣṇa breathed his last.

From the papers read at a symposium held at Vidur Sewa Ashram on the 19-21st October, 1975, it appears that some scholars have also independently found out a period near about 3137 B.C. on various literary, traditional and other grounds. Amongst these, some of the papers which arrived at a date near about the traditional period are enumerated below:

(i) His Holiness Swami B. M.
    Bonn Maharaj, Founder and
(C) PURANIC

President Institute of Oriental Philosophy
(on the basis of Śrīmad Bhāgabat, Purāṇas, Asvālayana Grihya Sūtra, Mahābhārata etc).

(ii) Dr. Ashok Kumar Chatterjee, History Deptt, Degree College, Gazipur.
(Geneology of the kings of Kāshmir in Rājatarangini and also literary, traditional and historical evidences).

(iii) Acharya Udyavira Shastry, Sanyāsa Āshram, Gaziabad
(computation from the time of Śaṅkara and literary evidences).

(iv) Prof : K. Srinivasa Raghavan, Śrī Arovinda Study Circle, Tamil Nadu

(v) Dr. Ramesh Chandra Purohit, Curator, Sindhia Oriental Institute, Ujjain
(Archaeological, literary and Astronomical evidences).

There are many others equally outstanding, but these will be sufficient to show that the Sūtras, the Purāṇas, Archaeological and literary evidences all point out to a date near about the traditional date of 3137 B.C.

It would be interesting to consider another body of references found the Purāṇas. From a Bengali book entitled ‘Prithivir Ithasa’, the list of kings as found in the various Purāṇas along with their reigning periods, where available, are given below:

THE BRAHMAVIRA DYNASTY

<table>
<thead>
<tr>
<th>Matsya Purāṇa</th>
<th>Reigning Periods</th>
<th>Vāyu Purāṇa</th>
<th>Reigning Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>kings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Somādhi</td>
<td>58 years</td>
<td>Somādhi</td>
<td>58 years</td>
</tr>
</tbody>
</table>
In the *Viṣṇupurāṇa* and also in the *Bhāgavata* the dynasties have been shown without their periods of reigns and there are some variants in the names as well. From the above an attempt has been made below to reconstruct the kings and their reigning periods with different names from the above two lists:

1. Somadhi  
2. Śrutasrava  
3. Ayutāyu  
4. Apratīpa  
5. Niramitra  
6. Surakṣha  

<table>
<thead>
<tr>
<th>Matsya Purāṇa kings</th>
<th>Reining periods</th>
<th>Vāya Purāṇa</th>
<th>Reigning periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Śrutasrava</td>
<td>64 &quot;</td>
<td>Śrutasrava</td>
<td>64 years</td>
</tr>
<tr>
<td>3. Apratīpa</td>
<td>35 &quot;</td>
<td>Ayutāyu</td>
<td>26 &quot;</td>
</tr>
<tr>
<td>4. Niramitra</td>
<td>40 &quot;</td>
<td>Niramitra</td>
<td>100 &quot;</td>
</tr>
<tr>
<td>5. Surakṣha</td>
<td>58 &quot;</td>
<td>Sukritya</td>
<td>56 &quot;</td>
</tr>
<tr>
<td>6. Bṛhadkarma</td>
<td>20 &quot;</td>
<td>Bṛhadkarma</td>
<td>23 &quot;</td>
</tr>
<tr>
<td>7. Senājit</td>
<td>50 &quot;</td>
<td>Son of</td>
<td>23 &quot;</td>
</tr>
<tr>
<td>8. Śrutanjay</td>
<td>50 &quot;</td>
<td>Śrutanjaya</td>
<td>24 &quot;</td>
</tr>
<tr>
<td>9. Vibhū</td>
<td>28 &quot;</td>
<td>Mahābāhu</td>
<td>25 &quot;</td>
</tr>
<tr>
<td>10. Śuchi</td>
<td>64 &quot;</td>
<td>Śuchi</td>
<td>58 &quot;</td>
</tr>
<tr>
<td>11. Kṣhema</td>
<td>28 &quot;</td>
<td>Kṣhema</td>
<td>28 &quot;</td>
</tr>
<tr>
<td>12. Anuvrata</td>
<td>60 &quot;</td>
<td>Bhuwan</td>
<td>64 &quot;</td>
</tr>
<tr>
<td>13. Sunetra</td>
<td>25 &quot;</td>
<td>Dharmanetra</td>
<td>5 &quot;</td>
</tr>
<tr>
<td>14. Nivriti</td>
<td>58 &quot;</td>
<td>Suvrata</td>
<td>38 &quot;</td>
</tr>
<tr>
<td>15. Trinetra</td>
<td>28 &quot;</td>
<td>Dhṛṇasena</td>
<td>58 &quot;</td>
</tr>
<tr>
<td>16. Dyumatsena</td>
<td>40 &quot;</td>
<td>Sumati</td>
<td>33 &quot;</td>
</tr>
<tr>
<td>17. Mahinetra</td>
<td>33 &quot;</td>
<td>Subala</td>
<td>22 &quot;</td>
</tr>
<tr>
<td>18. Achala</td>
<td>32 &quot;</td>
<td>Sunetra</td>
<td>40 &quot;</td>
</tr>
<tr>
<td>19. Ripuṇijaya</td>
<td>50 &quot;</td>
<td>Satyajīta</td>
<td>83 &quot;</td>
</tr>
</tbody>
</table>

821 years

| 9 13 years |

<p>| 1. Somadhi 58 years |
| 2. Śrutasrava 64 &quot; |
| 3. Ayutāyu 26 &quot; |
| 4. Apratīpa 35 &quot; |
| 5. Niramitra 60 &quot; |
| 6. Surakṣha 56 &quot; |</p>
<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Age (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Bṛhadkarma</td>
<td>23</td>
</tr>
<tr>
<td>8</td>
<td>Son of „</td>
<td>23 „</td>
</tr>
<tr>
<td>9</td>
<td>Senajita</td>
<td>50 „</td>
</tr>
<tr>
<td>10</td>
<td>Śrutanjay</td>
<td>50 „</td>
</tr>
<tr>
<td>11</td>
<td>Vibhu</td>
<td>28 „</td>
</tr>
<tr>
<td>12</td>
<td>Mahābahu</td>
<td>25 „</td>
</tr>
<tr>
<td>13</td>
<td>Śuchi</td>
<td>64 „</td>
</tr>
<tr>
<td>14</td>
<td>Kṣhema</td>
<td>28 „</td>
</tr>
<tr>
<td>15</td>
<td>Anuvrata</td>
<td>60 „</td>
</tr>
<tr>
<td>16</td>
<td>Bhuban</td>
<td>64 „</td>
</tr>
<tr>
<td>17</td>
<td>Sunetra</td>
<td>25 „</td>
</tr>
<tr>
<td>18</td>
<td>Dharmanetra</td>
<td>5 „</td>
</tr>
<tr>
<td>19</td>
<td>Nivriti</td>
<td>58 „</td>
</tr>
<tr>
<td>20</td>
<td>Suvrata</td>
<td>38 „</td>
</tr>
<tr>
<td>21</td>
<td>Trinetra</td>
<td>28 „</td>
</tr>
<tr>
<td>22</td>
<td>Dhṛdasena</td>
<td>58 „</td>
</tr>
<tr>
<td>23</td>
<td>Dyumatsena</td>
<td>40 „</td>
</tr>
<tr>
<td>24</td>
<td>Sumati</td>
<td>33 „</td>
</tr>
<tr>
<td>25</td>
<td>Mahinetra</td>
<td>33 „</td>
</tr>
<tr>
<td>26</td>
<td>Subala</td>
<td>22 „</td>
</tr>
<tr>
<td>27</td>
<td>Achala</td>
<td>32 „</td>
</tr>
<tr>
<td>28</td>
<td>Sunetra</td>
<td>40 „</td>
</tr>
<tr>
<td>29</td>
<td>Satyajita</td>
<td>83 „</td>
</tr>
<tr>
<td>30</td>
<td>Virajita</td>
<td>35 „</td>
</tr>
<tr>
<td>31</td>
<td>Arijita</td>
<td>50 „</td>
</tr>
<tr>
<td>32</td>
<td>Ripuñjay</td>
<td>50 „</td>
</tr>
</tbody>
</table>

1344 years

According to the Purāṇas, there were 32 kings of the Bṛhadratha dynasty, but here also a list of only 32 is arrived at. Therefore, all the kings have been accounted for. From the above list the total period of the Bṛhadratha dynasty comes to 1344 years and adding 653 years as the total years of the kingless periods, the end of the dynasty comes after about 1997 years. According to the Matsya Purāṇa, the Bṛhadratha dynasty was annihilated by Pulaka and afterwards he himself became the king.
His dynasty has also been variously described in the different Purānas, but taking the above method, the following list of the Prodyotas may be compiled:

1. Prodyota ........................................ 15 years
2. Munika ......................................... 23 ,, 
3. Palaka .......................................... 28 ,, 
4. Vishākayupa .................................... 53 ,, 
5. Śuryapa ......................................... 21 ,, 
6. Ajaka .......................................... 31 ,, 
7. Vartibardhana .................................. 20 ,, 

191 years

Further, according to the Purānas, the Śiśunāgas ruled after the Prodyotas, and here also, various names have been mentioned in the different Purānas. Taking the different name’s from the different Purānas and the Jaina text Mahāvaṃsa, the dynastic list comes as under:

1. Śiśunāga ........................................ 40 years
2. Kakavarna ...................................... 26 ,, 
3. Śukavarna ...................................... 36 ,, 
4. Kṣhemavarma ................................... 20 ,, 
5. Kṣhemadharma .................................. 36 ,, 
6. Kṣhemajita ...................................... 24 ,, 
7. Vindhyasena ..................................... 28 ,, 
8. Kṣhatrauja ...................................... 28 ,, 
9. Kānyana ........................................ 9 ,, 
10. Bhurimitra ..................................... 14 ,, 
11. Darsaka ........................................ 25 ,, 
12. Śūdhanya ...................................... 22 ,, 
13. Kālasoka Mahānanda ......................... 28 ,, 
14. Nāgadaśaka .................................... 24 ,, 
15. Śiśunāga 11 Viviya ........................... 25 ,, 
16. Vaṃsaka ...................................... 24 ,, 
17. Vimbisāra ...................................... 28 ,, 
18. Ajātaśatru ...................................... 27 ,, 
19. Udasi .......................................... 33 ,,
20. Nandivardhana 42 years
21. Mahānandi 43 years
\[ \text{Total: 582 years} \]

After the Śisunāgas the Nandas reigned for 100 years. Therefore, according to the above compilation, the reigning periods of the kings of Magadha from the Kurukṣetra war up to the end of the Nandas are as under:

<table>
<thead>
<tr>
<th>Dynasty</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Brhadratha dynasty</td>
<td>1344</td>
</tr>
<tr>
<td>Prodyotas of Avanti</td>
<td>191</td>
</tr>
<tr>
<td>The Śisunāgas</td>
<td>582</td>
</tr>
<tr>
<td>The Nandas</td>
<td>100</td>
</tr>
</tbody>
</table>
\[ \text{Total: 2217 years} \]

Unaccounted for years of the kingless periods as per:

<table>
<thead>
<tr>
<th>Period</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalhāna</td>
<td>653</td>
</tr>
<tr>
<td>Chandragupta Maurya</td>
<td>322 B.C.</td>
</tr>
</tbody>
</table>
\[ \text{Total: 3192 B.C.} \]

Apparently, therefore, if the different names of the Purānic lists and the Jaina texts are taken into consideration, the war period comes to a date very near the traditional date of the Kurukṣetra war. Admittedly, the Purānic compilers left out some names of the kings who ruled in Magadha and also their reigning periods, but all the Purānas combined together arrives at a date very near the traditional date, if the unaccounted for years are taken into consideration, or to a date near Kalhāna's findings if this period is not taken into consideration.

Thus, summarising the above, it is seen that according to the list compiled by Swami Dayānanda Saraswati a date near the traditional is arrived at. From the Purānic dynastic lists, which are professedly incomplete, two dates viz, 1921 B.C. and 1954 B.C. are arrived at but apart from the lists being incomplete, these have not taken into consideration that there
were three kingless periods in India of 420 plus the years which from Kalhana’s statement appears to be 653 years. In the recent Mahābhārata seminar held at Bijnor several scholars participated and the independent findings of some of them were near the traditional date. From a combination of different kings and their reigning periods as found in the Purānas a date near to the traditional date is also found. The difference in these cases is very minor considering the time that have elapsed and, apparently, the balance of evidence is in favour of the TRADITIONAL DATE OF 3137 B.C.
CHAPTER VII

THE DATE OF KURUKSHETRA WAR

(D) ASTRONOMICAL

The Mahābhārata contains innumerable astronomical references¹, which, if properly interpreted are likely to yield much revealing information in the context of the matter under review. Some of the verses contain data relevant to the war; others are merely poetics. Still, some of the interesting astronomical data as found in the Mahābhārata are appended below for information and appraisal. Some of these, however, will be interpreted in due course and others examined and rejected, if necessary. In the Udyogaparva, it has been stated: (a)

praṣāptam hī nīcchārṇ prahastākṣno mahādhūtīḥ ī
sannītavā pīdhyatī pīdhyate mahānāśaścāvām ī
kūtvā chaśākṣārāko vāKyāhāyām madhūṣudana ī
anurādasā mahārājyaṁ te śreṇīṁ saṁgaṁayatāṁ ī
vaiśeṣeṇa hī vārṇaṁ cītenām pīdhyate prahā ī
gosasā suṣṭam bhavatā suṣṭam rāhuṁprakāśatāṁ ī

M. Bh. Udyoga : 143

Prājapatyāṁ hi nakṣatram grahasākṣno mahādyutīḥ ī
Śnaiścaraṁ pīdāväti pīdāyante prāpinolādhikaṁ ī
Kriṭva cāṅgarakao vakrama jyestāyahām madhūṣudana ī
Anurādhāṁ prārthayate maitreṁ saṁgaṁayatāṁ ī
viśeṣeṇa hi varṇaṁ citrāṁ pīdāyate grahaḥ ī
Somasyā lakṣmaṇavāṛttaṁ rāhuṁprakāśataṁ ī

this indicates that “the planet Saturn is acute (tikṣṇa) and of effulgence oppress the star (Rohini or Aldebaran) of which the presiding deity is Prajāpati, and causes great affliction to living beings. O slayer of Madhu (Kṛṣṇa), Mars having taken retrograde motion near to Jyeṣṭha (Antares) has now approached

the star group Anurādhā (junction star δ Scorpionis) or has already reached it of which the presiding deity is Mitra. More specially, O descendant of the Vṛśṇis, a planet troubles the star Citrā (α Virginis). The marks on the moon are changed and the Node (Rāhu) is reaching the sun."

This actually indicates malefic planetary dispositions considered astrologically. From the above it appears that Saturn was acute and was very near Rohini. Mars took a retrograde motion in the Nakṣatra Anurādhā; and therefore, since Mars was retrograde in Anurādhā the Sun must have been nearly 180° away from it and very near the star group Kṛttikās (Pleiades)². An unknown planet was also stated to have been near Citrā (α Virginis). Another similar statement showing the malefic planetary dispositions is found in the Bhīmāparva³. This also gives the respective positions and dispositions of the planets. The verses are reproduced below: (b)

वषेतो ग्रहस्तथा चित्रां समाक्रम्य तिन्द्रित ||
धूमकेतुमहाघोरं पूव्यं चक्रम्य तिन्द्रित ||
मधास्वयं जारके ब्रह्म व्रद्धे च वृहस्पति: ||
संगत नक्षत्रसार्वमस्य सूर्यपुनः पीढ़ेते ||
शुकृ: प्रोष्टपादे पुढ़े समारूढ़ा दिशोचे ||
रोहिणार्म पीढ़यत्वेष मूलार्म यथिभास्करी ||
चित्रास्वयं वत्तें वै विभिन्नत: प्रथयत्: ||
व्रजानुबन्धू: कृतवा च अवनं पावक्यामः ||
बहुरासः समास्तुयु: लोहिताङ्को व्यवस्थित: ||
संतुसरसायिनो च ग्रहो प्रक्वजलिताबुधो ||
विधालयाम्: समोपर्यं तृषुपलितावनेश्चरो: ||

Śveto grahaṣṭhaṁ citraṁ samāṭikramya tiṣṭāti ||
Dhūmaketumahāghoraḥ puṣyaṁ cākramya tiṣṭati ||
Maghāsvaṅgārake vakraṁ śravane ca vṛhaspātiḥ ||

2. It will be seen later that this position of the sun is impossible unless it was taken about 6 months before the war actually started.
3. M. Bh : Bhismaparva : ch. 3.
Bhagaṃ nakṣtramākramya suryapūtreṇa pīdyate II
Śukraḥ proṣṭhapade pūrve samāruhya virochate II
Rohiniṃ pīdayatyevamubhau ca īśābhaskarau I
Citrāsvātyantare caiva viṣṭitaḥ paruṣayah II
Vakrānuvakramāṇaṃ kritvā ca śravanaṃ pāvakaprabhā I
Vrahmarāśiṃ samāvritya lohitāṅgo vyavasthitāḥ II
Samvatsarasthāpinau ca grahau praṇjvalitavubhau I
Viśākhayaḥ samīpasthau vṛhspatiśnāiscarau II

Form the above it appears that: "the white planet (Venus) stands by passing over the star CITRĀ (α Virginis). A dreadful comet is stationed at the star group PUSYĀ. Mars retrograde is in the MAGHĀS, and Jupiter is placed in divisional SRVANĀ. The son of sun (Saturn) oppresses the Nakṣatra Bhaga (Pūrva Phālguni) by overtaking it and Venus in the Nakṣatra Proṣṭhapāda (Pūrva Bhādrapada) shines there. Both the sun and the moon oppress the star or the Nakṣatra Rohini. A cruel planet is stationed at the junction of CITRĀ and SVĀTI Nakṣatras and the ruddy planet (Mars) looking like fire and having got even motion at ŚRavana stands by overpowering the Nakṣatra presided over by BRAHMĀ. Stationed near the Viśākhās, both Jupiter and Saturn appear as it to be burning and would continue to be so in the same condition there for one year."

The planetary positions as enumerated in the above two groups of statement are tabulated and shown in the following chart:

<table>
<thead>
<tr>
<th>Planet</th>
<th>Position as per Ref: (a)</th>
<th>Position as per Ref: (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturn</td>
<td>Rohini</td>
<td>P. Phālguni or Viśākhā</td>
</tr>
<tr>
<td>Mars</td>
<td>Anūrādhā</td>
<td>Maghā or Rohini</td>
</tr>
<tr>
<td>Sun</td>
<td>Jyeṣṭhā or Kṛttikā</td>
<td>Rohini or opp. Maghā. Dhanisthā</td>
</tr>
<tr>
<td>Moon</td>
<td>...</td>
<td>Rohini</td>
</tr>
<tr>
<td>Unnamed Planet</td>
<td>CITRĀ</td>
<td>between CITRĀ &amp; SVĀTI</td>
</tr>
<tr>
<td>Rahu</td>
<td>near Jyeṣṭhā</td>
<td>P. Bhādrapada or CITRĀ. ŚRvanaṇā or Viśākhā</td>
</tr>
<tr>
<td>Venus</td>
<td>...</td>
<td></td>
</tr>
<tr>
<td>Jupiter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It may be observed that the positions in the different groups as tabulated above vary considerably and cannot form the basis of any working hypothesis. It is, therefore, considered that these passages simply reveal that malefics afflict the constellations and the Zodiacal divisions. Retrograde malefics are found to be near the constellations and are not considered astrologically auspicious; Venus, if in the first part of sidereal Citrā is considered debilitated in the Zodiacal division Virgo; Rohini Śakata Veda is not auspicious at all for the benefit of of the people in general. Inspite of this, the late Mr. Lele attempted to find out the chronology from the information provided by the above mentioned verses and arrived at the date of 5229 B.C. He also found out that the positions of the planets actually arrived at do not agree with the aforesaid positions indicated in the available recension of the Mahābhārata.

These data, as provided in the above two verses, therefore, serve no purpose in respect of the fixation of the time period of the war; apart from these there are other statements also in connection with the planetary dispositions during or prior to the war period. Several such statements are enumerated below:

राहुरागसरासदित्तमप्रवृत्ति विख्याम्पतेः
Rāhurāgaśarasadādityamaparvaṇi viśāmpate

राहुरागसरासदित्तमप्रवृत्ति विख्याम्पतेः
Rāhurāgaśarasadādityamaparvaṇi viśāmpate

Both the above statements mean that Rahu eclipsed the sun "अपर्णि" i.e., when it was not the season, or in other words, there was solar eclipse when it was not the occasion of the new moon. Further, it is also noticed that there were both solar and lunar eclipses prior to the period of the war. The Mahā-

5. M. Bh. Sabha : ch. 79.
bhārata statements run thus:

चन्द्राद्वितियां वृषभप्रस्ता एकाहङ्ग्रहिनयोदयो ||
अपर्यावें प्रहुरन्ति प्रजा संक्षयं सिद्धत ||

Candrādityāvubhaugrasta ekāhāṅghritrayodaśīm ॥
Aparvāṇi grahenaśi prajā samkṣayamicchata ॥

i.e., on the thirteenth day there were both solar and lunar eclipses out of season; and these untimely eclipses indicate loss of subjects. Similar statements regarding solar and lunar eclipses are also found in the Mahābhārata which mean that the moon and the sun were eclipsed in the same month on the 13th day.  

चन्द्रसूर्यावब्ध्यो ब्रह्मसेवकोसी एयोवालोम् ॥
Candrasūrīvubhau grasatāmekamāśīm trayodaśīm ॥

From the above two statements Prof: Sengupta found out that if the statements are correct, the lunar eclipse fell on August 30 and the solar eclipse on the September 14, 2451 B.C.  

Another statement declares that either on the day of the battle or on the previous full moon day there was a lunar eclipse. The statement runs thus:

सोमस्य लक्षणवृत्तं राहुरक्षुपचित च ॥
Saumasya lākṣmavyāvṛttam rahurarkamupaiti ca ॥

All these go a long way to show that due to the adverse planetary positions the danger to the lives of the people and to the country was imminent. This fact was further reiterated in the following verses:

रोहिणि वीढ़यन्ते स्थितो राजवाशः ॥
व्यावर्तलक्षसा भविष्यति सहद्रभयम् ॥

Rohiniṃ pīḍayanneṣa sthito rājan śanaischaraḥ!
Vyāvṛttalakṣmasaumasya bhaviṣyati mahaḍbhayaṃ ॥

8. ibid. ch. 3.
10. M. Bh. 5. 143. 4.
The verse indicates that Saturn remains oppressing the star Roheni (Aldebaran), the markings of the moon are reversed and warns that this bespeaks of great dangers which are to come very shortly. Again after the death of Karṇa, evil indications were noticed and were stated thus12:

हुले कण्य सरितो न प्रस्तहू तुगाम चालते सरिता दिवाकरः ्
श्वेतो प्रहुश्च ज्वलनारंबेः सोमस्व पुनोस्वृरवियाय तिर्धकः ॥
Hate karṇe sarito na prasasrjugāma castaṃ savita
divakaraḥ ॥
Śveto grahaśca jvalanārka varṇaḥ somasya
putroībhudiyāya tiryak ॥

It says that when Karṇa was killed, streams and rivers ceased flowing and the sun disappeared. The white planet (Venus) took the hue of burning sun and the son of moon (Mercury) became visible while rising heliacally in an oblique manner. Mahābhāraṇa states further13:

वृहस्पतिः संपरिवायथ रोहिनिसु मूषू चन्द्राकसमो बिशाम्पते ॥
Vṛhaspatiḥ samparivāryya rohinim vabhuva candrārkasamo viśampate ॥

Jupiter surrounded the star Rohini (Aldebaran) and became (bright) like the sun and the moon.

From all the above verses, it appears that both astronomical and astrological statements are completely mixed up together. It is surmised that at the time of the modern recension of the Mahābhārata, the theories of astrology were systematised and some of the statements cannot but be taken as modern interpolations. But with the lapse of time it has become very difficult to sort out the bran from the chaff. On a review of the positions of the planets as indicated in the above verses, it is seen that Saturn is either in conjunction or in malefic aspects (astrological) with the star Rohini (Aldebaran). Jupiter was retrograde throughout and was near Rohini. Mars was retrograde and was near Jyeṣṭhā (Antares) or in the Maghās

13. ibid. — 94. 51.
and being cruel was oppressing the star *Citrā* (« *Virginis*). Venus, the white planet is either combust or heliacally setting. Mercury became heliacally visible obliquely. All these are mixed up statements and are full of ‘truth and fiction’ and present a picture of astrological bias of the impending calamity; and as already stated they contain later interpolations. Therefore, for the purpose of the present disquisition only astronomical references relating to or made by Vyāsa, Krśňa, Bhīśma, Balarāma etc. i.e., those figures around whom the story of the *Mahābhārata* revolves should be taken into serious consideration.

Before proceeding to interpret those astronomical references in the *Mahābhārata*, it is necessary to state that up to and even after the time of the *Mahābhārata* war the term ‘nakṣatra’ was intended to mean a star or a cluster of stars and not the theoretical division of the ecliptic measuring 13° 20’ each as we know it now. In the later period of the *Vedāṅga Jotīśa*, the ecliptic was divided into 27 equal parts of 13° 20’ each; and each of these divisions was attributed to each ‘nakṣatra’ or the star cluster which was within this division. As such, while considering the word ‘nakṣatra’ in the *vedic* or the *purānic* literature, it is desirable to take the ‘nakṣatra’ to mean a star or a cluster of stars. The astronomical references obtaining in the *Mahābhārata* in the context of the battle are mainly incidental and state only the moon’s phases near the various star groups and do not directly refer to the solstices or the positions of the equinoxes in respect of any event except that of grandfather Bhīśma’s death. The only reference to the solstice is found to indicate the day when Bhīśma died, the sun reached the winter solstice.

Admittedly, not all the references obtaining in this great compilation are absolutely true or correct. Quite a few modern interpolations and poetical effusions bordering on fiction have been included at various periods. But some facts within it cannot but be true, if we accept that there is even an iota
of truth in the whole of *Mahābhārata*. One such, is that the battle began sometime after the new moon near the star group presided over by *Indra*. Another is that Bhīṣma, the great patriarch, died on the winter solstice day, which fell, as stated, when about three-fourths of the month of *Māgha* (lunar) was over. The *Mahābhārata* itself stands on the pillar of Bhīṣma’s truthfulness and on the dharma of Krīṣṇa. Therefore, the statement of Krīṣṇa that there is to be new moon on the seventh day from his talk with Karṇa needs necessarily to be taken as truth since upon him devolved the duty to prove the power of truth.

Therefore, in this treatise an attempt at determining the time period of the *Kurukṣetra* battle has been made from the incidental statements made in the *Mahābhārata* and from the various time references included in this great compilation. These references mainly show the position of the moon near a particular star or a star group, although no mention of the *tiḥi* is noticed. *Nakṣatras* in these references, as already stated, mostly refer to the single star or star groups and not the theoretical portion of the zodiacal division. During the *Vedāṅga* *Jotisa* period, the whole of the ecliptic was divided into 27 *nakṣatras* of 13° 20’ each, but since it is not possible to determine accurately when such division was made, it seems proper that the *nakṣatras* should be taken to mean the stars or the star groups. But since lunar month was possibly the vogue of the period, both the new moon and the full moon cannot occur near the individual stars or the star clusters. Therefore, variation in degrees from the star groups are inevitable and conjunctions and oppositions should be considered to have occurred within a reasonably variable range of the star groups.

In the *Udyogaparva*, it is seen that Krīṣṇa went to the court of *Hastināpur* at the end of *Śarata* season, in the

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14. M. Bh.: udyoga: 83. 7:

कौमुदे मासि रेषत्यां शरद्यस्ते हिमागमे ।

Kaumude māsi revatyaṁ śaradante himāgame ।
beginning of Hemanta (season) on a day when the moon was in Revati. He went on a peace mission to mediate the dispute between the Kauravas and the contending Pândavas; but his mission was unsuccessful. On his return to the Virāṭa country, where the Pândavas were residing, he directed them to start for the battle-field with the moon in the Pusyā (8 Cancri). Further in the Śalyaparva15, there is a statement in which Krishṇa is purported to have said: O Pândavas come out with me when the moon is in Pusyā.

This day when the moon was in Pusyā, after Krishṇa’s unsuccessful peace mission, is very important on account of (i) the fact that the Kauravas started for the battle field on that day, (ii) the Pândavas arrived two days later, and (iii) Balarāma started on pilgrimage on the same day. Although the Pândavas arrived at the battle field two days later, the battle did not start on that day16. The battle actually started sometime later as will be shown in due course. Krishṇa, while returning from the Kaurava court to the Virāṭa country, met Karna on the way and had a talk with him. He entreated Karna to join the Pândava side but Karna refused. At this Krishṇa told him that17 “seven days from to-day there will be the period of the moon’s invisibility or Amavasyā; there-

15. M. Bh. Salya 36. 10:

निर्गच्छवः पाण्डवेया पुष्येषा सहितामया ।
Nirgacchaydhaṃ pāṇḍaveyā puṣyeṇa sahitāmayā ।

16. M. Bh. Salya:

मया विषयगः सोमस्तदिनं जयपल्लज शीतमानाश्च संपेतु दिति सप्त
महाग्रहः ।
Maghā viṣayagaḥ somastadinaṃ prayapadyata dīpyamaṇānāśca sampetu ditī sapta mahāgrahā ।

17. M. Bh. Udyoga Parva : 142. 18.

सत्तमान्ती पि विषयादावाः गतिन्यति ।
Saptamāntī pi divasādāvāśyā bhaviṣyati ।
Samgrāme yujyatam tasyam tāṁ hyāhuḥ sakradevataṁ Ṛś.—
fore, begin the battle on that day as the presiding deity (of the nakṣatra) is Indra”. It is, therefore, found that about the time when the war broke out there was a new moon either near the star Antares or Jyeṣṭhā of which the presiding deity is Indra or in Viṣākhā (४ Libra) which is presided over by both Indra and Agni. Since Viṣākhā is presided over by both Indra and Agni and since Kṛiṣṇa referred to the star presided over only by Indra. (शक्रेब्रताम्, Śakradevatām), it is more probable that he referred to the Amavasyā when the moon was in Jyeṣṭhā or Antares. This point will be further discussed in due course.

It is also seen that Balarāma, the elder half-brother of Kṛiṣṇa, was not happy with the state of affairs in the country and did not want either to take side with or even to be present during the period of the war. Instead, therefore, he went on pilgrimage. About his going on pilgrimage we find two statements which are apparently contradictory to each other. The first one is\(^\text{18}\):

\[
\text{ततो मन्ये परेरतायं जगाम यदुवंदनः ||}
\text{तौरंयक्तां हुलधर: सरस्वत्यां महायशा: ||}
\text{मैत्र नक्षत्र योगोस्म सहित: सबं यादवे ||}
\text{Taṭo manyuparitātma jagāma yadunandanaḥ ||}
\text{Tirthayatram haladharaḥ sarasvatyāṁ mahāyasāḥ ||}
\text{Maitranakṣatrāyogosma sahitaḥ sarvvayāḍave ||}
\]

i.e., “Haladhsara (known as Balarāma) went on pilgrimage towards river Svarasvati with all the people of the Jūdava tribe when the moon was in a star presided of over by Mitra”. This may mean Anārādhā (८ Scorpii) of which the presiding deity is Mitra; or (मैत्रनक्षत्र) maitranakṣatra may simply mean a friendly star. The second\(^\text{18}\) statement is what Balarāma himself said on the 18th day of the war, on his return from pilgrimage and when he was present at the mace duel between Bhima and Dūryodhana, both of whom were his disciples. He said:

\[\text{18. M. Bh : Salīya Parva : 35.13.14.}\]
If the first statement is examined critically, it is noticed that Balarāma went out on pilgrimage when the moon was in Anurādhā (8 Scorpii) whose tropical longitude on 1.1.1976 was 242° 14' 8". 8. This is the star presided over by Mitra. If however, he started on pilgrimage when the moon was in conjunction with this star, then after 41 days, i.e. on the 42nd day, he would have returned to Kurukṣetra with the moon in Rohini or Aldebaran and this would have to be the 18th day after the battle started. In the circumstances the battle should have begun when the moon was in Hasta (8 Corvi) whose tropical longitude on 1.1.1976 was 193° 7' 3".8. This position of the moon for the beginning of the battle is apparently untenable. Therefore, there must be another and more proper explanation of this Mahābhārata statement. It is well-known that even now most Indians consider that for going on a long journey or for that matter on a pilgrimage — Aśvini, Pusya, Hasta, Anurādhā, Revati, Mṛgširas, Mālā, Puṇarvasu and Jyeṣṭhā are the propitious stars to commence the journey. Each day is divided into 15 mūhurtas and to each Mūhurta is assigned the lordship of a particular star. Each of these mūhurtas cover 48 minutes of our modern idea of time reckoning and the third mūhurta of the day belongs to Anurādhā star. Therefore, to start on a journey, even if the moon’s nakṣatra is propitious, the mūhurta is also additionally considered as a matter of good omen. Anurādhā mūhurta is presided over by Mitra and starts at 1hr. 36m. after sunrise and continues for 48 minutes. Therefore, Maitra nakṣatra quoted in the verse should preferably be interpreted to mean ‘maitra mūhurta’. This was the hour of
the morning when Balarāma went out on pilgrimage with all the people of the Jādava tribe.

The second statement made by Balarāma goes on to say that: "since I went out it is 40 and 2 days; I went out when the moon was in Pūṣyā and I have come back when the moon is in Śravaṇā". And that was on the 18th day of the battle. In examining this statement it is found that on 1.1.1976, the star Pūṣyā or 8 Cancri had a tropical longitude of 128° 23' 10.8; this was the position of the moon of the time on 1.1.1976 when Balarāma went on pilgrimage. In 41 days the moon moved 540° 13' 50.49 at the mean rate of 13° 10’ 34”.89 per day and reached 668° 37’ 1”.29. Therefore, deducting 360°, the position of the moon comes to 308° 37’ 1”.29. The tropical longitude of Śravaṇā or Altair was 301° 26’ 13”.8 on 1.1.1976. Therefore, the statement made by Balarāma is substantially correct even with the present day longitudes of Śravaṇā. If it is taken that Balarāma went on pilgrimage at the exact conjunction of the moon with Pūṣyā, he arrived on the battlefield on the 18th day of the battle at Śravaṇā but about 7° 10’ 47.49 ahead of the exact conjunction. This is true, of course, taking the mean daily rate of motion of the moon for 1976, but since moon’s motion is very uneven, it is quite possible that Balarāma returned back from his pilgrimage when the moon was not in this position but somewhere nearer to Śravaṇā. From the current ephemerides of 1975 and 1976, it is seen that the moon was in Pūṣyā on the 21st December, 1975 and moved to Śravaṇā on the 31st January, 1976; thus it took the moon exactly 41 days’ motion to reach Śravaṇā starting from Pūṣyā, of course, naturally after one full revolution. This was in the lunar month of Agraḥāyana and Pauṣa and roughly corresponds to the period under review.

Thus, from the above the following data come out:

(i) Kiṃśha started for the Kaurava court when the moon was in Revati or t Piscium whose tropical longitude on 1.1.1976 was 19° 32’ 28”.8,
ii) Balarāma went on pilgrimage when the moon was in *Pūṣyā* or *8 Cancri* whose tropical longitude on 1.1.1976 was 128° 23' 10".8,

(iii) He returned on the 42nd day, i.e., on the 18th day of the battle when the moon was near *Śravaṇā* or *Altair*, whose tropical longitude on 1.1.1976 was 301° 26' 13".8,

(iv) on the day when the moon was in *Pūṣyā*, after Kṛiṣṇa’s unsuccessful peace overture at the *Kaurava* court, Dūryodhana repeatedly instructed his followers to start for the battle field.¹⁹

Prāyadhvāṃ vai kurukṣetram puṣyodyeṭi punaḥ punaḥ l
i.e., repeatedly he said, march to the *Kurukṣetra* when the moon rises in *Pūṣyā* and,

(v) while returning from *Hasṭināpur* after his unsuccessful attempt, Kṛiṣṇa had a talk with Karna, when he said that there would be a new moon or the period of moon’s invisibility on the 7th day with the moon on a star presided over by *Indra*.²⁰

Saptamāccaṃi divasādāmāvāśaṃ bhaviṣyatā l
i.e., from the 7th day from to-day there will be *Āmāvasyā*; begin the battle on that day, as its presiding deity is *Indra*.

Assuming that the star referred to by Kṛiṣṇa was *Antares* (*Jyeṣṭhā*) and not *Vitakhā* or *α Libra* where the *Āmāvasyā* was to occur, the following mean planetary positions as on 1.1.1976 are obtained. The tropical longitude of the star *Jyeṣṭhā* or *Antares* on 1.1.1976 was 249° 25' 36".8 and the moon took 7 days motion from the day at Kṛiṣṇa’s speech with Karna to reach the star. The mean daily motion of the moon for 1976 was 13° 10' 34".89 and in 7 days the total mean motion of the

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¹⁹. M. Bh : Udyoyga : 150.3.
²⁰. ibid : 142. 18.
moon comes to 92° 14' 4".23. Therefore, at the time of Kriṣṇa's talk with Karna the position of the moon was at (249° 25' 36".8 minus 92° 14' 4".23) 157° 11' 32".57, i.e., 3° 47' 12".23 behind δ Leonis (Pūrva Phālgunī) whose tropical longitude on 1.1.1976 was 160° 58' 44".8. Had he, however, referred to the new moon at Viśākhā (α Libra), whose tropical longitude on 1.1.1976 was 224° 44' 51".8, the position of the moon during his speech with Karna would have been (224° 44' 51".8 minus 92° 14' 4".23) 132° 30' 47".57, i.e., only 0° 30' 6".37 ahead of Aśleṣā (ε Hydrae) whose tropical longitude on 1.1.1976 was 132° 0' 40".8 and then it would not have been possible for the Pāṇḍavas to start for the battle field with the moon in Magha or α Leonis. In this case the the time elapsed from Kriṣṇa's talk with Karna to the Pāṇḍavas’ going to the battle field with the moon at Magha would have been approximately 1.35 days at the mean rate of daily motion of the moon. This time factor leaves hardly enough allowance inasmuch as Kriṣṇa had to go back to the Virāta country, advice the Pāṇḍavas and then make arrangements for their movement to the battle-field within such a short time. This presents immense logistical difficulties and is quite impossible. Hence it is certain that Kriṣṇa referred to the Āmāvasāya at Jyeṣṭhā or Antares.

Again, Kriṣṇa started for Hastināpura on his peace mission when the moon was in Revati or Ω Piscium whose tropical longitude on 1.1.1976 was 19° 32' 28".8; and if it is taken that Kriṣṇa referred to the new moon at Jyeṣṭhā or Antares in his speech with Karna, the time elapsed from his going out on peace mission to the time of his talk with Karna would have been 10.37 plus days; and had he referred to the new moon at Viśākhā or α Libra, the time elapsed would have been 8.54 days, which seems to be quite on the short side to cover all his busy itinerary. He had to attend the Kaurava court at the very least for two days; he had to spend some time on his journey bothways; he had to attend a meeting with Vidūra; and then while on the point of being detained, he managed to leave Hastināpura, probably surreptitiously; and then on his way
back he met Karna to whom he firstly advised to join the Pândava party as the supreme commander but on his refusal to do so he advised to start the war on Āmāvasyā which was to fall on the 7th day. After that he had to go back to the Virāta country and advise the Pândavas to make suitable arrangements to conduct such a big battle in which the whole of the then India was represented. All these activities within the short period of 8.54 days seem quite impossible. Therefore, it seems more probable that Kṛiṣṇa referred to the Āmāvasyā at Jyeṣṭhā or Antares. The question that has to be settled at the very outset is whether the battle actually started on the Āmāvasyā at Jyeṣṭhā or later. Since very little time remained for Kṛiṣṇa to go back to the Virāta country and then make proper arrangements for such a big battle by way of arranging soldiers, tents, captains of the army, logistical arrangements, removal of the wounded and the dead, the balance of probability rests with the war having been started later than the period at Āmāvasyā referred to by him in his talk with Karna.

With the available data, there is another way to verify this. Assuming that Balarāma started on pilgrimage with the moon in Paśyā, he returned when the moon was in Śravaṇā and that was the 42nd day after he left and on the 18th day since the war broke out. It has already been shown that when he returned, the approximate position of the moon was 308° 37’ 1” .29 i.e., 7° 10’ 47”.49 ahead of Śravaṇā. Therefore, since the battle started, the moon moved for 17 days. In 17 days, the moon’s approximate motion would be nearly 223° 59’ 53”.13 at the mean rate of daily motion for 1976. Thus, on the day of the battle, the moon’s position, according to this, would be (308° 37’ 1”.29 minus 223° 59’ 53”.13) 84° 37’ 8.16 which is 1° 14’ 51”.36 ahead of Mrgśiras or λ Orionis, whose tropical longitude on 1.1.1976 was 83° 22’ 16”.8. Hence, since Kṛiṣṇa’s talk with Karna, about 7 days plus a fortnight had passed when the moon was near about the star group Mrgśiras. In the circumstances the war could not have started in Āmāvasyā but
actually started in Pūrṇamāṣṭi. This can also be verified from another event recorded in the Mahābhārata.

It is noticed that while Kṛiṣṇa was negotiating peace at the Kaurava court there was a full moon near the Kṛttikās²¹. It is also known that Kṛiṣṇa started on his peace mission "at the end of Śarata season, in the beginning of Hemanta (season) and on a day when the moon was in Revati". The tropical longitude of Revati or α Piscium was 19° 32′ 28″.8 on 1.1.1976 and that of Kṛttikās or μ Tauri was 59° 39′ 24″.8. Therefore, from the day that Kṛiṣṇa started for Hastināpur to the day when there was the full moon at Kṛttikā, the moon traversed about 40° 6′ 56″; and at the mean motion of the moon for 1976, it takes only 3 days plus for this to happen. Thus, it can easily be surmised that the battle could not have started on that full moon day but actually started on the next full moon.

In examining this from another angle it is seen from the Mahābhārata²² that on the 14th day of the war Abhimanyu, Kṛiṣṇa's nephew and Arjuna's teenaged son was killed in an ungallant warfare being surrounded by seven rathis or senior was captains of the Kaurava side. At this Arjuna became very angry and took the vow that he would kill Jayaḍratha, who was the main instigator of this gross act of injustice, by the next evening²³. The same afternoon, before evening fell, the sun became invisible and the sky became dark as night. At this, Arjuna killed Jayadratha²⁴ but after sometime, the sun came up with its full glory again. Apparently, therefore, there was a total solar eclipse visible at Kurukṣetra latitude just before the evening on the 14th day of the war and this made Jayadratha discard his extreme caution which he punctilliouly maintained throughout the entire period of the day. From this,

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²¹ M. Bh : Bhīṣma : 2.23 : this full moon will be elaborately discussed later.
²² M. Bh : Drona : 49
²³ ibid 73
²⁴ ibid 164.6
it can safely be assumed that this was a new moon day and 14 days back when the battle began it had to be a full moon day.

On further scrutiny of the *Mahābhārata* statements, it is seen that the night of the 14th day of the battle was so very dark that during the severe battle at night oil lamps had to be lit, and with that light the battle was fought\(^2\)\(^5\). The fight was continued into the night and at midnight, the *rakṣasa* hero Ghaṭotkaca, a progeny of Bhima, was killed. The contending armies were so very tired that they slept under terms of temporary truce on the battlefield itself. The *Mahābhārata* statement gives the following particulars\(^2\)\(^6\):

\begin{verbatim}
वद्धैरित्रं समाजमेव निधानां विषेषत: ।
समबः हाससनिन्त्वत् साह: कष्टिया दीनचेतस: ।।
ते युवं यद्य सर्वध्वस्वपारस्त सैनिकाः ।
निमोलयत चार्काः रणमूला युहर्तकम् ॥
ततो विनिद्रा विभाषा वचनमस्यचिते पुनः ।
संसाधयं स्मयोऽन्यं संग्रामं कुर्पान्वतः ॥

Ardhvarātriḥ samājagme nidrāṃdhānāṃ viśeṣataḥ ।
Sarve hyāsannirūtsāhāḥ kṣatriyā dinacetasah ॥
Te yuyāṃ yadi manvadhvamupāramata sainikāḥ ।
Nimilayaṭ caṭraiva raṇabhūmān mūrtaṇkāṃ ॥
Tato vinidrā viśrāntā ścandramasyadite punaḥ ।
Saṃśādhyāisyathānyonyam saṃgramam kurūpāndavaḥ ॥
\end{verbatim}

Thus, the soldiers slept for sometime and after a period when the moon rose, the battle started again with renewed vigour. The *Mahābhārata* says\(^2\)\(^7\):

\begin{verbatim}
यथा चन्द्रोदयोऽखतः: क्षुभित: सागरोमवसत् ।
तथा चन्द्रोदयोऽखतः: स बमुख तलाणवः ॥
ततः प्रवर्ते युधं पुनरेव विशाम्पते ।
लोकेऽविनियोऽथ परलोकभीमस्ताम् ॥
Yathācandroḍayodbhūtaḥ kṣubhitaḥ sagaroṭbhavaḥ ।
\end{verbatim}

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25. ibid 163.1  
27. M. Bh. ibid.
THE DATE OF KURUKSHETRA WAR

Tathā candrodadayodbhūtaḥ sa vabhūva nalāṅavahāḥ
Tataḥ pravārte yudham piṇareva viśāmpate
Loke lokavināśāya paralokambhīpsatām

i.e., just as the ocean becomes turbulent when the moon rises, thus became the sea of the armies with the rise of the moon; O king, then the battle began again between men wishing for the blessed life in the other world and for the annihilation of the subjects.

It is seen, therefore, that on that night, after midnight was over and the armies of both sides slept for sometime, the moon rose and again the battle began. As regards the time when the battle was resumed and the condition of the moon, the following statement of the Mahābhārata speaks for itself:

हर बृःतमानवसमच्छः समरकारासन पूर्ण समप्रभः

नववद्धृष्णतासायनोहर्षः प्रविसूतः कुमुदाकरवालवः

Haravṛṣattamagātrasamadyutiḥ smaraśarāsanapūrṇa-

samaprabhaḥ

Navavadhūṣmitacārūmanoharaḥ pravisṛtaḥ kumu-

dākaravandhavaḥ

and also:

त्रिभागमात्राः सप्तां राशिं युधभर्त्तिं

Tribhāgamātraśeṣāyaṃ ratryāṃ yudhavamavartata

hence, it is seen that only one-fourth of the night was left when the battle was resumed. The moon was like the head of the bull of Mahādeva, like Cupid's bow fully drawn out and as pleasant as the smile of a newly wedded wife. The moon then began to spread her golden rays. Therefore, leaving aside the poetical effusions, the following facts come out. At the time when the war resumed the moon was observed to have a crescent shape with sharp horns like those of a bull. The night was then almost over as the sun began to rise in the east after a little while. If it is accepted that the lunar month

28. ibid 185.
29. ibid 187.1.
30. ibid 187.1.
began in those days also from the day of the full moon, the 14th day of the war fell at the middle of the month of Agraḥāyaṇa and corresponds to the early part of the present day calendar month of December. The time of the moon rise on the day of the new moon or on the previous day may be at about 5-30 A.M. when roughly one hour’s darkness still remains. Thus, since the crescent moon was visible in the early hours of the dawn, the day possibly started with the 29th tīthi and the new moon began sometime late in the afternoon of the day. Therefore, the moon was approximately a day’s motion or so behind the sun on the 14th morning.

Some further statements of the Mahābhārata may now be recounted for further elaboration. In the Bhīṣmaparva, a statement made by Vyāsa to Dhṛtṛśtra is found. It states31:

आलक्षे प्रभयाहीनान् पौण्यासी च कात्तिकीम्
चंद्रोज्ज्वलितवर्ज च पश्चवण् नधः च चे

Alakṣe prabhayāhīnām paurṇamāsīṁ ca kārtikīṁ
Chandroro’jvalitvarj ca paścavān nābhāṣthale

i.e., I find the full moon at the Kṛttikās (Pleiades) lustreless, the moon is visible like a fire like hue in the lotus coloured sky. In this context a serious consideration has to be made. It is to be remembered that (पौण्यासी च कात्तिकीम्) paurṇa-
māsīṃ ca kārtikīṁ full moon in the lunar month of Kārtika does not necessarily mean that the moon should be in exact astronomical conjunction with the Kṛttikās. In this particular case, as per Vyāsa’s statement, the exact conjunction was probably due to occur within a short period, say a few hours, and hence the hue of the moon and the sky is different from normal. This may also be due to the foggy weather which is sometimes seen at the Kurukṣhetra region during early winter. If the full moon was to occur on the next morning, the moon would be short from the oppositional point by near about a day’s motion and consequently it would be 14 day’s old when Vyāsa spoke to Dhṛtarāstra.

In examining another very important statement obtaining in the *Mahābhārata*, it is seen that on the 10th day of the battle at about sunset, Bhīṣma, the first general of the *Kaurava* army fell wounded and was unable to further participate in the fight; he remained on his bed of arrows and expired after 58 nights from the 10th day of the battle. On the day of his death the sun took its northerly course or in other words the *Uttarāyāna* or the winter solstice began. Yudhiṣṭhira came to the battle-field where Bhīṣma was lying to pay his last respects and, if necessary, to perform the last rites. The relevant *Mahābhārata* verse\(^3\) states:

उषित्वा शस्त्रेण श्रीमान् पञ्चासानकरोत्तमे।
समयं कोरवाग्रस्य सम्मार पूर्वस्थ्यम्॥
स निर्ययो जपुराद्य याज्ञवल्क्य: परिवारितः।
दृष्टा निब्रूत्तमादि: प्रव्रत्तं चोटोरायणम्॥

Uṣitvā śarvariḥ śrīmaṇaḥ pañcāsannagarottame
samayam kaurava-grasya sasmāra pūrūśasravaḥ
sa niryayo gajapūrādyājakaiḥ parivāritaḥ
Drśtva nivruttamādityam pravṛttam cottaśaṇam

i.e., Yudhiṣṭhira residing at his beautiful township of *Haṣṭināpur* for 50 nights (i.e., after the battle was over) came to remember that the day when the *Kaurava* chief would leave this mortal world had arrived. He, therefore, went out of *Haṣṭināpur* with a party of priests, after having come to know that the sun had stopped from the southerly course and that the northerly course had began. Apparently, therefore, there was some means of observation of the solstices at the time, and Yudhiṣṭhira, finding after 50 nights from the 18th day of the battle, that the time of the winter solstice had arrived, went back to the battle field to be present at the time of Bhīṣma's death. When Yudhiṣṭhira met Bhīṣma at *Kuru-kṣetra*, he (Bhīṣma) thus spoke to him\(^3\):

32. M Bh.: Anusasana: 167:
Diṣṭya prāptomā kaunteya sahāmātyo yudhiṣṭhira l
Parivṛthoḥi bhagavaṇ sahasrāṁśurdivakaraḥ l
Asthapaṅcāṣataṁ rātryāḥ sayānasyādyya me gataḥ l
Śaretu niśitāgṛesu yathā varṣaṣataṁ tathaḥ l
Māghoṣṭyaḥ samanuprāpto māsaḥ saumyo yudhiṣṭhira l
Tribhāgāṣeṣaḥ pakoṣyam śuklo bhavitumahati l

i.e, it is a piece of good luck, O Yudhiṣṭhira, son of Kunti, that you have come here with your ministers. The all-powerful (महावान) sun has turned (i.e, taken its northerly course). I am lying here for 58 nights on the bed of pointed arrows; this time seems to me as long as a hundred years. O Yudhiṣṭhira, the month of Māgha (lunar) is now in progress; this should be the light half of the moon and its three-fourths should be over. Actually, however, it was the dark half of the month84 but about three-fourths of the dark fortnight was over.

Both the above verses are corroborative of each other as Yudhiṣṭhira went to the battle-field from Hastīapur, 50 nights after the battle was over. But Bhīṣma had to pass 58

34. It has already been seen that on the 14th day of the battle there was the period of Amavasya and since that day Bhima died 54 nights later. Thus it still remains about 5 days to complete 2 lunations. Thus, his death was on the dark half and about the 9th or the 10th tithi.

The original word was possibly Krisna and might have been changed later to Sukla to bring out the approved time of Bhima's death. Nilakantha, the commentator of Mahabharata quotes a verse from Bharata Savitri which says that “Bhima was killed by Arjuna on the 8th day of the dark half of the month of Magha”—Bhima parva : ch. 17.2 quoted in Anc : Ind : Chr : F. N. p.9.
nights on the bed of arrows since he fell on the 10th day of the battle. It would not be out of place to mention another verse appearing in the Śāntiparvā:

पञ्चासातं षट् च कुरुप्रवीरे शेषं दिनानां तब जीवितस्य।
तत् शुभं: कर्म्मफलोदयस्तवं समेध्यसे भीष्म बिसुच्य देहम्॥

Pañcāsatam sat ca kurūpravira śeṣam diṇāṃ tava jīvitasya.

Tataḥ suvaiḥ Karmaphalodayaistvam sameṣyase Bhīṣma vimucya dehaṃ.||

i.e., O Bhīṣma, chief of the Kuru clan, it still remains 56 days of your life; after that, due to the resultant effect of your good deeds you will discard your mortal body (and attain bliss). This statement made by Kṛiṣṇa was in a different context and does not fit in with the time of his death. But, apparently, this was predicted on the third day from his (Bhīṣma’s) retirement, when Kṛiṣṇa possibly went to see him for the first time and compliment him for his gallant fight.

The last but the most important astronomical indication that is found in the Mahābhārata is that Yudhiṣṭhira was consecrated for the year long Āsvamedha yajña which started with the full moon in the spring season. The period in question is stated to be citrāpurṇamāsa (चित्रापूर्ण मास) or the day of the full moon near the star Cittā or α Virgo. Vyāsa spoke to Yudhiṣṭhira thus:

चतुर्वाहि हि पौर्णमीयां तु तय दीक्षा महिष्यति।

Caitrām hi paurnamāsyāṃ tu tava dīkṣā bhavisyati.||

i.e., you will be consecrated on the Cittā full moon. Cittā full moon occurs on the subsequent 5th full moon from the day of the Kārtika full moon when Vyāsa pointed to Dhṛtarāṣṭra that the moon had become lustreless. From the ephemerides it is noticed that the time period for the moon to move from Kṛttikā full moon to Cittā full moon covers about 144.50 days but taking the synodic period of the lunar month

35. M. Bh. Santi : 51 : 44.
36. M. Bh. Āsvamedhika : ch. 72.
to have 29.530588 days per month the period comes to about 147.65 days. Therefore, taking the uneven motion of the moon into consideration, 146.65 days may be taken to cover this period. Taking this figure, the moon at the total approximate motion of 13° 10' 34'' .89 per day for 1976, covers 1951° 19' 14''.95. Deducting multiples of 360° the actual movement since the Kārtika full moon comes to 151° 19' 14''.95. Adding this to the moon’s tropical longitude of exact conjunction with the Kṛttikās (59° 39' 24''.8), its tropical longitude on the Citrā full moon day comes to 210° 58' 39''.75. On this day, Yudhiṣṭhīra was going to be consecrated for the Aṣvamedha jajña. Since this was a full moon day the sun’s tropical longitude would be approximately 30° 58' 39''.75. It is also seen that the tropical longitude of Citrā on 1.1.1976 was 203° 30' 21''.8 which is very near to the position already found above.

Summing up the above, it is found that in the year of the battle: (i) after Kṛṣṇa’s talk with Karna there was a new moon near the star Jyeṣṭhā or Antares, (ii) the war started at the full moon next to the one referred to by Vyāsa in his talk to Dhartrāstra, (iii) the battle lasted till the moon reached Śravana or Altair, (iv) Bhīṣma became incapacitated on the 10th day of the battle, (v) after 58 nights he expired when the sun took its northerly course, and (vi) Yudhiṣṭhīra was consecrated on the Citrā full moon for the year long Aṣvamedha jajña.

From the aforesaid the following time schedule may be drawn up:

A) Time from the full moon at the Kṛttikās to the full moon when the battle started

- Bhīṣma’s generalship: 10 days
- Bhīṣma on his arrow bed before his death: 58 days

Total: 97.50 days

B) From Kṛttikā full moon to full moon of lunar Agraḥāyana

- 29.50 days
Lunar month of *Agrahāyana* 29.50 days
Lunar month of *Pauṣa* 29.50 days
3/4th of the dark fortnight of *Māgha* 9.00 days

97.50 days

C) On the 18th day of the battle the moon was 1½ days old and was in conjunction in *Śravaṇa* and the sun took the northerly course in about 50 days.

From the above data we can proceed with our calculation in order to find out the time period of the battle. The mean celestial longitudes of the stars for 1.1.1976 referred to in this treatise are given in *Annexure C*.

A) The moon at the assumed conjunction with *Kṛttikās* or *Alcyone* was 14 days old.

Hence the (1976) celestial longitude of the moon at the time was

\[= 59° 39' 24.8" \]

The moon was 14 days old and the mean synodic month had a length of 29.530588 days—say 29.53 days.

Therefore, the moon was ahead of the sun by

\[ \frac{360° \times 14}{29.53} = 173° 43' 18" \]

Hence the sun’s present day (1.1.1976) mean celestial longitude for the time under review

\[ = 245° 56' 06.8" \]

Sun’s motion in 97.50 days

\[ = 96° 5' 30" \]

Hence the present (1.1.1976) mean celestial longitude of the sun for reaching the winter solstice of the year of the *Kurukṣhetra war*

\[ = 342° 1' 36.8" \]

B) Since Vyāsa pointed out about the lustreless full moon to Dhṛtrāstra there
was a new moon at Antares or Jyeṣṭhā. Assuming that the sun and the star Antares had the same celestial longitude on the day, we have the celestial longitude of the (1.1.1976) sun at the new moon at Antares.

\[= 249° 25' 36.8''\]

Since on the 14th day of the battle there was Āmāvasyā, the moon is one day short of the conjunction, and therefore it was 28.50 days old.

Therefore, the moon was ahead of the sun by:

\[
\frac{360° \times 28.50}{29.53} = 347° 26' 36''
\]

Therefore, the sun’s present day longitude at the time of Moon’s conjunction with Antares (360° plus 249° 25’ 36.8’’ minus 347° 26’ 36’’)

\[= 261° 59' 0.8''\]

Sun’s motion in 80 days

\[= 78° 51' 6''\]

Hence the mean celestial longitude on 1.1.1976 of the sun for reaching the winter solstice of the Kurukṣetra war year

\[= 340° 50' 6.8''\]

C) The position of the moon at the assumed conjunction (as on 1.1.1976) with Śravaṇa when Balarāma returned from pilgrimage:

\[= 308° 37' 1.29''\]

This was the 18th day of the war. On the 14th day afternoon the Āmāvasyā started, as already found. Therefore, it continued till 15th evening. Thus on the 18th morning the moon was 1½ days old. Hence the moon was ahead of the sun by

\[
\frac{360° \times 1.50}{29.53} = 18° 17' 48''
\]
Therefore the present day (1.1.1976) celestial longitude of the sun for that time:

(360° plus 308° 37' 1".29 minus 18° 17' 48") = 290° 19' 13".29

Sun's motion in 50 days = 49° 16' 56".20

Hence, the (1.1.1976) mean celestial longitude of the sun for reaching the winter solstice of the Kurukṣetra war year = 339° 26' 9".46

We have, therefore, received various values for the present (1.1.1976) mean celestial longitude of the sun for reaching the winter solstice for the Kurukṣetra war year, as under:

A) = 342° 1' 36".8
B) = 340° 50' 6".8
C) = 339° 26' 9".49

Taking the mean of these three values we find:

= 340° 45' 57".7

Thus from the above, we find the present day (1.1.1976) mean tropical longitude of the sun for the winter solstice of the Kurukṣetra battle year to be 340° 45' 57".7. Therefore, the total shifting of the winter solstice up to the end of 1975 is roughly 340° 45' 57".7 minus 270° = 70° 45' 57".7 and represents a lapse of 5115 years at the approximate rate of precession of 49".80 per year. Hence the year of the Kurukṣetra war comes to near about 3139 B.C. and this is very near the traditional date of 3137 B.C. which should be accepted as the period of the Kurukṣetra war.

At this juncture it is necessary to verify astronomically that Bhīṣma died in the dark half of the moon and not in the light half. Since the Kārtika full moon, (i.e., from the beginning of the lunar month of Kārtika) three full lunar months plus three-fourths of the fortnight had passed when Bhīṣma died. The time schedule showing the number of days thus passed have been recorded before and comes to 97.50 days. We find that
three complete full moon periods take 88.50 days at 29.50 days from one full moon to the other but still 9 days after the full moon are left out to complete 97.50 days. Therefore, Bhīṣma died in the dark half, i.e., after the full moon, on or about the 9th tithi, which at a rough estimate comprises of three-fourths of the dark half of the moon.

From some current ephemeris, it is found that the years 1912/13 corresponds with the Kurukṣetra war year in as much as the full moon at the Kṛttikās occurred on November 29, 1912. Taking this as the basis, the mean tropical longitudes of the sun and the moon at 5-30 P.M. I.S.T. are given below in the from of a time table of the battle period.

<table>
<thead>
<tr>
<th>Year 1912. Month and date</th>
<th>Tropical longitude of the sun</th>
<th>Tropical longitude of the moon</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov/24</td>
<td>241° 52'</td>
<td>59° 37'</td>
<td>full moon at Kṛttikās.</td>
</tr>
<tr>
<td>Dec/1</td>
<td>248° 57'</td>
<td>159° 28'</td>
<td>Krishna's talk to Karṇa at P. Phālgunī.</td>
</tr>
<tr>
<td>Dec/8</td>
<td>256° 04'</td>
<td>253° 34'</td>
<td>Āmāvasyā at Jyeṣṭhā</td>
</tr>
<tr>
<td>Dec/23</td>
<td>271° 20'</td>
<td>82° 00'</td>
<td>battle started, Mṛgśīras full moon.</td>
</tr>
</tbody>
</table>

| Year 1913 | |
|-----------||
| Jan/1     | 280° 30' | 211° 13' | 10th day of the war when Bhīṣma fell. |
| Jan/5     | 284° 35' | 252° 39' | 14th day of the war when Jayadratha was killed. |
| Jan/9     | 288° 39' | 311° 25' | 18th day of the war, Balarāma returned in Śrāvaṇa. |
| Feb/20    | 331° 16' | 142° 55' | Pūrṇamāsi near Magha before Bhīṣma died. |
| Feb/28    | 339° 19' | 256° 32' | Bhīṣma died and winter solstice began. |
| March/22  | 1° 16'   | 181° 19' | Hastā Pūrṇamāsi. |
| April/20  | 29° 48'  | 204° 27' | Citrā pūrṇamāsi when Yudhiṣṭhira was consecrated for Asvamedha sacrifice. |

37. Krishnamurti's Ephemeris.
From the above table, it would appear that almost all the positions of the sun and the moon agree with those mentioned in the text and also with those already found by us. Further, it may be seen that on the day Bhīṣma died the tropical longitude of the sun is almost the same as the figure found in this Chapter and the variation is negligible. This figure, when converted into time element also comes to very near the traditional period of 3137 B.C. Thus, from all the astronomical references as verified by the current ephemeris the same period is arrived at. Therefore, there are very justifiable grounds for acceptance of 3137 B.C. as the period of the Kurukshetra war.
CHAPTER VIII
THE DATE OF KURUKSHETRA WAR

EPILOGUE

The object of this treatise was to find out the date of the Kurukṣheatra war. For this purpose no effort has been spared in the previous Chapters to present and analyse the relevant portions from various classical works of Indian and Greek authors pertaining to the Kurukṣheatra war period. In the Chapter entitled ‘The Antiquity of Indian Chronology’ describing the heliacal rising of the Åśvins and the Maghās, the sun’s depression at the time of calculation has been taken as 18° below the horizon. In case, however, the magnitude of the stars was greater and they emitted more brilliant colours at that remote period, the depression would be shorter and the time period should be lowered by about 72 years (approximately) for each further degree of lower depression. As stated in previous Chapters, the investigation of the time factor of the vedic period has been deemed necessary to make certain of the existence of a developed culture at that remote period and to test the probability of its transmission to the later Purānic period of the Mahābhārata. Throughout the relevant parts of this treatise an attempt has been made to prove that the vedic culture was evidently mature at that period of hoary antiquity. Hence the period of the Kuru-Pāṇḍavas naturally inherited as much cultural development and maturity. As such, the descriptions, at least the majority of them, appearing in the Mahābhārata text elaborating cultural development of that period cannot but be taken as a reality.

More preference has been noticeably accorded to the astronomical methodology to find out the time period of the war than any other. This may be argued that Purānic and epigraphic evidences have not been properly investigated. The Purānic evidences, as these are found, are
incomplete as shown in Chapter VII. The dynastic lists included therein are also contradictory to each other, and no mean factor can be determined to equate their proper values. The search for the time period of the Kurukshetra war culminated on the finding of the true beginning of the Kali era as the battle was stated to have been fought at the junction of the Kali and the Dwāpara eras. Many instances have been quoted in the relevant Chapter and discussed extensively to point out the difficulty in proving the Purānic statements. Another example is given below to substantiate the above statement. Bhaṭṭotpala quotes in his commentary on Brhad Samhitā⁴ that at the juncture of Kali and the Dwāpara eras, the seven rishi were in the nakṣatra Maghā and they, being faithful to their religious performances were engaged in the protection of the people. Apparently, this contains a riddle which cannot be easily solved. If the rishi were in the nakṣatra Maghā, they evidently were the Great Bears, who were stated elsewhere to be in the Maghās both during Yudhiṣṭhira and Parīkṣita’s time. But the riddle lies in the next part of the verse. If the rishi were in the Maghās and if they are taken to mean the Great Bears, how can they be faithful to their religious practices, or how can they be engaged in the protection of the people? The verse runs thus:

कलिदावरसन्धी तु स्थितास्ते पितृदावितम्
मूनयो चाम्यन्निरतता: प्रजानाः पालने रता: ||
Kalidvāparasandhāvu tu sthitāṃste pitṛdaivatam ||
Munao dharmaniratāḥ praśānāṃ pālane ratāḥ ||

Although there is controversy regarding the proper interpretation of the word pitṛdaivatam (पितृदावितम्), the verse has been quoted in the context of the period of Yudhiṣṭhira’s reign and as such must be taken to mean the Maghās. Thus, it may be seen that the fixation of the beginning

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1. Bhattotpala’s commentary on Brihad Sam. Ch. XIII. 3. Since ‘Pitris’ are the presiding deities of Magha, ‘pitridaivatam’ means the nakṣatra Magha.
of the Kali era is the most important factor in utilising the Purānic evidences, since Bāhradraṭha dynasty began from the end of the Kurukṣetra war. This was 36 years before the Kali era had started. But the insurmountable obstacle that faces both the astronomers and the Śaṅskrit scholars is the alleged movement of the riṣhis or the Great Bears. Some verses have already been quoted in the relevant chapter and two others are appended below to prove the point. In the Viṣṇupurāṇa, there is a verse:

प्रयास्यन्ति यदा चैते पृविसादं महर्षयः ।
तदा नन्दं प्रभृत्येशाः कलिव्रृद्धिं गमिष्यति ॥

Prayāsyanti yadā caite pūrvāśāḍāṁ maharṣayaḥ
tadā nandāṁ prabhṛtyeṣāḥ kalivṛddhiṁ gamiṣyati

i.e., when the riṣhis moved to the Purvāśāḍās, the Nandas came into existence. Again from the Bhāgavata Purāṇa a verse containing the same meaning is found as under:

यदा मधास्यो यास्खल्लि पृविसादां महर्षयः ।
तदा नन्दं प्रभृत्येशाः कलिव्रृद्धिं गमिष्यति ॥

yadā mahābhūyo yāsyanti pūrvāśāḍāṁ maharṣayaḥ
tadā nandāṁ prabhṛtyeṣāḥ kalivṛddhiṁ gamiṣyati

Therefore, the movement of the riṣhis forms the focal point. But the Great Bears cannot have any movement whatsoever according to modern astronomy. These Purānic references containing the movement of the riṣhis cannot be put to any use towards fixation of ancient chronology. These evidences may be examined casually for the verification of other results, but can neither be put to severe test nor can these form the nucleus of independant investigation, at least for fixation of chronology.

In the Purāṇas, calculation of the dynastic chronology from Parikṣīta to Nanda has also been made by the
The Date of Kurukshetra War

The navānṛ) Parikṣita-nandāntara system, as it is found from a verse appearing in the Viṣṇupurāṇa. The verse runs thus:

वालतु परीक्षितो जलम याबनन्दासिंहवरम्

And ब्रजसहरस तृज्ञेयः पन्थवशालोत्तरम्

Yāvaḥ parikṣito janma yāvannandābhiśecanāṁ

Evāṁ varṣasahasram tu jñeyam pāṇcaśatottaram

It has been stated here that from the birth of Parikṣita to the accession of Nanda, the interval is one thousand and five hundred years. There are also variations of the reading of (पन्थवशालोत्तरम्) pāṇca śatottaram from which the range in the interval in time between Parikṣita and Nanda varies considerably. Further, the dynastic lists as furnished in the Purāṇas are also incomplete as confessed by the compilers themselves. In the circumstances, although the references obtained from the classical Greek historians, the extant traditions, the Purānic dynastic lists and also astronomical references in the Mahābhārata have all been utilised, emphasis has been laid on investigation of the time period through astronomical data. It should be mentioned here that Babu Bankim Chandra Chattopādhāya of ‘Vandemataram’ fame, tried to find out the Kurukshetra war period through the Puranic methodology in the introduction to his work ‘Krishṇacaritra’. He found out that the war period was at 1430 B.C. Since this date does in no way coincide with the traditional or any other date this may be discarded, but as a pioneer his work in this field should be given due appreciation. It is not claimed that the astronomical data utilised for the purpose of finding the time period is infallible inasmuch as the position of the moon stationed at a nakṣatra is only given in the Mahābhārata; but detailed verification of the time period from various angles leaves only a limited room for error. But, even then, it must be admitted that because of the moon’s extremely uneven motion, there remains a chance for variation, although slight.

EPILOGUE

Most of the traditional references appearing in the various records have been discussed in detail in Chapter VI. Amongst these, Kalhana’s statement, that the Kurukshetra war was fought 653 years after the Kali era had began, has also been analysed, and the reasons for this discrepancy have been located. Since he could not find out the reigning periods of 35 kings of Kāśmīr, he committed the error of advancing the war period by 653 years. He also could not locate the three kingless periods in the history of India. As we have found out the date of the war by various other methods, and, since the date coincides with the traditional date of 3137 B.C., there seems to be doubt that Kalhana was mistaken in placing the period of the war. In this case, the corroborative evidences are the Purāṇas, which categorically state that the Kali era began just after Kriṣṇa’s demise, which, according to Mahābhārata tradition was 36 years after the Kurukshetra war. Therefore, Kalhana’s working data were incomplete and so he placed the war period 653 years after the advent of the Kali era.

We have already shown that the Greek historians speak of a continuity in the line of kings in India and from these, an approximate time period of the war has been found out. That was about 3000 B.C. Since the tradition was existing at about the 4th century B.C., as found from the accounts of the classical historians, this can not be the astronomical creation of Aryabhaṭṭa as suggested by Burgess. In fact, this tradition was current in the country about 800 years before Aryabhaṭṭa had even been born. He had only put on record what was current as tradition regarding the beginning of the Kali era in his own time. This was not his creation by calculating (or mis-calculating) backwards.

In the foregoing Chapters most of the relevant materials obtaining in the classical narratives, the Purāṇas, traditional records and the Mahābhārata have all been examined from different angles and it has been found that the Kurukshetra war

was fought at or about 3137 B.C. This is also the traditional date current in the country at least for more than two thousand and three hundred years. One interesting point that needs special consideration is that, if this date is accepted as correct, if the vedic periods calculated by astronomical methods are accepted, possibility of an 'Aryan' invasion or 'Aryan' migration into India at about 1500 B.C., or at any later date whatsoever, other than the invasion of the borders by Cyrus (558–530 B.C.) and the full scale invasion into the country by Alexander the Great may be safely ruled out. This view has also the indirect support from the records of classical Greek historians, since they have not mentioned of any tradition or even a local story current in the then India about their coming from outside or from anywhere else. Traditions are national memories, and, they die very hard. On the other hand, from the Indian traditions and from old Persian sayings, they asserted that there was no full scale invasion into India except by Alexander the Great. Hence, the 'Aryans' must be the indigeneous people of India, born in this country, living in the country and migrating out of the country when necessary. If so, their history has to be rewritten to bring out the proper sequence of events since earliest times and investigations should be carried out to assess their migratory movements to the west from time to time.

We have traced the literary history of Krishṇa since vedic times. In the later period, 'Krishṇa' was identified with 'Viṣṇu' and still later, during Pāṇini's time at about 500 B.C, Bāṣudeva-Arjuna cult was well-established in the northern territories. In course of time, this cult also petered out and Bāṣudeva-Saṅkarsana cult came into existence. It was also replaced later by 'Krishṇa' or 'Gopāla' cult. We have discussed the literary evidences of antiquity about 'Krishṇa' in Chapter III, and here some of the epigraphic records of the 'Vaiṣṇava' cult are enumerated to prove that this cult took a precedence since the pre-Christian times. This becomes evident from the earliest
available 'Vaiśṇava' epigraph, the Besnagar Garuḍa Pillar Inscription of the time of Bhagabhadra, Regnal year 14, which has been assigned to the end of the 2nd century B.C. The Inscription reads:

(language Prakrit influenced by Sanskrit; Script-Brāhmī of circa end of the 2nd century B.C.)

Text. Part I

1. [दे] बदेवस वा [सुदे*] बस गरुढ़वजे भर्यं
2. कारिते ह [अ] हेलिओडोरेअ भाग
3. वर्तेन दियस पुनेस ताक्खसिलाकेन
4. योनि दूलेन [आ] गर्तेन महाराजस
5. अंतलिकितस उप [[*] ता सकासं रक्षो
6. कासी =पु [भ] स [भ] गभद्रस भातादस
7. वर्तेन च [तु] दलेन राजेन बब्हासास

For the 7th line D. R. Bhandarkar reads:

बासिना मफ [दे] से नाहराजे नवघ [ .'..] मा [नुसा सनाम*]

1. [दे] वाडेवस वा [सुदे*] वस गरुठद्वजे यामिन
2. रारिते [अ] हेलिओडोरेअ भाग
3. वर्तेन दियस पुनेस ताक्खसिलाकेन
4. योनि-दूलेन [आ] गर्ते भानाराजस
5. अंतलिकितस उप [ो] तासकासं राक्षो
6. कासी =पु [त्] स [भ] एगभद्रस त्रादास
7. वसेना च [तु] दलेन राजेन वद्भासास

Bhandarkar: Vāsinā mapha [दे] शे नाहराजे नवधख [म] ता [नुसा सनाम]

This means, in short, that this Garuḍa column of Bāsudeva, the God of Gods, was erected here by Heliodoros the Bhāgavata, in the 14th year of his kingship. This Bāsudeva is none other than Kṛiṣṇa the son of Basudeva, and has been

identified with ‘Viṣṇu’ by the erection of the Garudadvaja. The Mathurā Stone Inscription of Sodāsa belongs to the period of 10–25 A.D. and the names of the five heroes of the Vriśṇi tribe, including Bāsudeva and Saṃkarṣana have been included. Kṛṣṇa belonged to this tribe and was considered to be their well wisher and chief adviser. Therefore, Bāsudeva referred to in this inscription is none other than Kṛṣṇa who was also revered as the ‘avatāra’ of ‘Viṣṇu’. We have already seen that Pāṇini refers to the joint cult of Bāsudeva and Arjuna. The next stage “in the evolution of the Bāsudeva sect is marked by the dropping of Arjuna”\(^8\) as is evidenced from the above inscription.

The next stage of development of the Kṛṣṇa cult is found in the Ghosundi Stone Inscription of king Sarvatata\(^9\). This shows that in the 2nd half of the 1st. century B.C. Saṃkarṣana-Bāsudeva cult came into existence and Saṃkarṣana (=Balarāma) has evidently been given a predominance as he was mentioned first. Both of them were identified with Nārāyana=Viṣṇu. Similar preference was also given in the

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i) [कारितो अयः राजा भागवः] [ते] न गाजायमेव पाराशारी पुजार्य स

ii) [ब्रताते अश्वमेच या*] जिना भगव [द*] स्यां सङ्कर्षणः बासुदेवास्यां

iii) [अनिहतायम वास्वेष्वराः] स्यां पूजा-शिला-प्राकोरो नारायण बाठका]

i) [kārito ayaṁ rajāṁ Bhāgava] [te] na gājāyanena pārāśarīputrena Sar

ii) [vatātena aśvamedha yā] jinā Bhagava [d] bhyāṁ Saṃkarṣaṇa-vasudevābhyāṁ

iii) [anihatabhyāṁ sarvesvarā] bhyāṁ puja-śilā-prakāro Nārāyaṇa-vāṭakā
Nanaghat Cave Inscription\textsuperscript{10} of Nāgānika at the beginning of the 1st century A.D. (नमो सञ्ज्ञाणे बालुदेवसामूि = \textit{namoh saṁkaraśana vāsudevāvam}). It appears that during the very early periods of the Christian era the ‘\textit{vyuha}’\textsuperscript{11} or ‘Krīṣṇa Śakti’ as envisaged at a later date by the ‘\textit{Gaudīya Vaiṣṇava sect}’ was also recognised. We find in the Mathurā Stone Inscription of the time of Sodāsa (c. 10–25 A.D.), the images of five deified heroes of the \textit{Vṛṣṇi} tribe. A part of the Inscription reads\textsuperscript{14}:

\textbf{Text.}

भगवताम्  \textit{Vṛṣṇiṇाम्} \textit{pañcavārānām} pratimāḥ śaila-devagr [he sthāpitāh]

Lueders has has identified\textsuperscript{18} the \textit{pañcavārās} as (i) Baladeva, (ii) Akrūra, (iii) Anādhristi, (iv) Sārana, and (v) Vidūratha, whereas, in the \textit{Vāyu\textit{purāṇa}}\textsuperscript{14} the identities of the five heroes are found in the verse quoted below:

\begin{quote}
सञ्ज्ञाणे बालुदेव: \textit{pradyumnaḥ} सामव \textit{एव} \textit{वष}  \\
अनिभद्रस्व पञ्चेते \textit{बंशबीराः} \textit{प्रकोटिताः}. Ⅱ
\end{quote}

\begin{quote}
\textit{Saṁkaraśaṇo} vāśudevaḥ pradyumnaḥ sāmva eva ca Ⅰ \textit{Aniruddhaśe pañcaite vamśavirāḥ prakṛtitāḥ} Ⅱ
\end{quote}

Therefore, at this period the \textit{Krīṣṇa} cult was well-established and ‘\textit{vyuha}’ divisions of Krīṣṇa’s śakti was already recognised. Pātañjali\textsuperscript{18} refers to \textit{Kamsabhakta} and \textit{Bāsudevabhakta}, who wore red and black faces while appearing in the performance of \textit{Kamsavadha} drama. The reasons for this was explained by B.C. Keith. He sets aside all the literary evidences and explains Krīṣṇa and Kaṁs as “the spirit of the spring and summer” which “prevails over the spirit of the dark winter”\textsuperscript{16}.

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10. Select Inscriptions : Sircar ; p. 186 f.
12. Select Inscriptions : Sircar ; p. 122 ; Cunningham, \textit{A.S.R}, XX, p. 49 Plate 5, No. 4 ; Lueders, Ep. Ind. XXIV, p. 194 etc.
15. \textit{Mahābhāṣya—Patanjali}; 111.1.6.
He also compares this cult as the primitive dramatic situat of the slaying of winter which is the source whence the drama is derived in India as in Greece. He forgot to consider that the Indian winter in the Mathurā region was not so very severe as to necessitate the formulation of a ‘summer-winter’ cult.

Another ‘Vaiśṇava’ inscription in one line was found on the (गदा) gadā held by a four armed standing male figure of stone. This was found near Burhikhar near Malhār in the Bilāspur district, Madhya Pradesh. The figure is locally known as “Caturbhīja Bhagavān”. The “line of writing in Brāhmi characters of about the close of the 1st. century B.C., begins in the upper part of the gadā and comes downwards”17. The importance of this is the existence of a ‘Viṣṇu’ temple at the beginning of the Christian era.

We have now dealt with some of the inscriptions belonging to the ‘Vaiśṇava’ cult of the pre-Christian eras and the 1st. century of the Christian era. The inscriptions found at these places conclusively show the existence of ‘Bāsudeva’ cult prior to the Christian era which also continued into the early part of our era. Some scholars have assumed that the legends connected with Kiṣhṇa can only be explained by the influence of Christianity and the Christian legends. R. G. Bhandarkar thinks that the Ābhīras were responsible for bringing the legend into the country. He also thinks that it is possible “they brought with them the name of Christ also and this name probably led to the identification of the boy-god with Vāsudeva–Kiṣṇa”18. The Ābhīras were mentioned in the Mahābhāṣya of Pātanjali (c. 150 B. C.) and Tarn is of opinion that the Ābhīras possibly entered India after Alexander’s invasion19. Apparently, Christ was not even born at the time when Bāsudeva cult was in existence in the country. Bhandarkar’s theory is, therefore, untenable. Similarly,

Dr. Maunicol’s observation that there “seems to be good ground for believing that about the middle of the 7th century Nestorian missions (which are believed to have entered India from the north in the year 639) may have brought stories of the child Christ as well as pictures and ritual observances which affected the story of Kṛiṣṇa as related in the Purāṇas in relation to the celebration of his birth festival”\textsuperscript{20} seems to be quite far-fetched. Keith has pointed out that there is no proof that the Nestorian mission entered India in 639 A.D.\textsuperscript{21} and going a step further Eliot states that “there is strong evidence that most of the doctrines and practice resembling Christianity have an Indian origin”\textsuperscript{22}. This elaborate discussion has been necessary to show that Kṛiṣṇa cult was Indian in origin and Indian by practice; it was existing within the country before Christ’s birth. Also from the Mahābhārata we find that he was a historical figure and was known by various names e.g. Bāsudeva, Kṛiṣṇa, Gopāla, amongst others.

It may be mentioned that in the astronomical portion of the calculation, only approximate values have been taken and detailed calculations have not been undertaken. For that, the time period may differ, but only slightly. It has been seen that Bhīṣma died in the dark half of the moon whereas, he himself stated that it was the light half. This has been explained with details, and if we take it that the war began on the full moon day, the period of Bhīṣma’s death must have been in the dark half. Later interpolation from ‘kṛṣṇa’ (कृष्ण) to ‘sukla’ (सुक्ल) has been suggested with proofs in its proper place. From the calculations made with the help of the current ephemeris, it is seen that he died with the moon in the Maghās, of which the presiding deities are the ‘Pitrīs’; and since he was leaving this mortal world and going to his forefathers, it is not impossible that he decided to die with the moon in a naksatra of which the presiding deities are the ‘Pitrīs’.

\textsuperscript{20} Dr. Maunicol : Indian Theism, p. 275.
\textsuperscript{22} Eliot : Hinduism and Buddhism ; vol iii, p. 427.
Yudhishṭhira was consecrated for the Āśvamedha sacrifice on the day of the (चित्रापूर्णमास) citrā pūrṇamāsa according to Vyāsa’s statement. If Vyāsa told this after Bhīṣma’s death, there remained only about 52 days left by which time the horse had to move throughout the length and breadth of India. But we do not know when this was spoken but if it was just after the war, there was enough time; but in case, it was after Bhīṣma’s death, the time was short and the horse could conveniently travel only 1500 miles or so. We also do not know if more horses than one were utilised for this purpose. By now, most of the relevant matters and almost all the statements which are of importance have been discussed.

From the foregoing Chapters we have found out that the Kurukṣetra war fought at about 3137 B.C. and now after considering all the aspects we find no reason to change our viewpoint.
Annexure A

Let the above figure represent the observer's celestial sphere at the latitude of Kurukṣetra. Here PZQHH' is the observer's meridian, HE< KHH' the horizon, QEQ' the celestial equator and γSLK the ecliptic. S indicates the sun's position at 18° below the horizon. According to our interpretation Sγ = 30°, when it was the beginning of Indian spring. z is the point on the horizon where z-Arietis rose at the time. Z and P respectively denote the Zenith and the celestial pole of the observer. Join Pγ and PS by arcs of great circles, PS cutting the celestial equator at M. Draw zL perpendicular to the ecliptic.

For 1931 A.D., z Arietis had its—

(1) mean celestial longitude = 36° 41' 50" and
(2) mean celestial latitude = 9° 57' 46" N which is taken to remain constant.

The θEγK = obliquity of the ecliptic

= 24° 6' 35" according to our assumption which was true for 4000 B.C.

(a) In the triangle γSM, we have γM = 27° 47' 18", and SM = 11° 47''

(b) In the triangle PZS, ZS = 108°; SP = 101° 47' and PZ = 60°. The angle ZPS is given by,—
\[ \tan \frac{ZPS}{2} = \sqrt{\frac{\frac{ZS + PS - PZ}{2} \times \frac{ZS + PZ - PS}{2}}{\frac{ZS + PS + PZ}{2} \times \frac{PS + PZ - ZS}{2}}} \]

Hence we find the angle \( ZPS = 103^\circ 20' 54'' \)

(c) Again in the triangle \( E\gamma K, \angle KE\gamma = 120^\circ \);
\[ E\gamma = \angle ZPS + \angle SP\gamma = 90^\circ \]
\[ = 103^\circ 20' 54'' + 27^\circ 47' 18'' - 90^\circ \]
\[ = 41^\circ 8' 12'' ; \]
and \( \angle E\gamma K = 24^\circ 6' 35'' \)
The arc \( \gamma K \) is given by,
\[ \cot \gamma K \sin E\gamma = \cos E\gamma \cos 24^\circ 6' 35'' \]
\[ - \tan 30^\circ \sin 24^\circ 6' 35'' \]
\[ = \cos E\gamma \times \cos (24^\circ 6' 35'' + \phi) \]
\[ \cos \phi \]
Where \( \phi \) is given by \( \tan \phi = \frac{\tan 30^\circ}{\cos E\gamma} \)
Whence \( \phi = 37^\circ 28' 25'' \);
\[ \therefore \gamma K = 55^\circ 31' 51''. \]

(d) From the same triangle we then find angle \( K \), which becomes \( = 43^\circ 43' 17'' \).

(e) Lastly from the small right-angled triangle \( K \angle L \), we obtain \( KL \) by the equation,
\[ \sin KL = \tan \angle L \times \cot K \]
\[ = \tan 9^\circ 57' 46'' \times \cot 43^\circ 43' 17'' \]
\[ \therefore K \angle = 10^\circ 35' 7'', \angle L \) being the celestial latitude of \( \alpha \text{ Arietis} \) for 1931 supposed to remain constant throughout.

Thus, at the time which we want to determine, the celestial longitude of \( \alpha \text{ Arietis} \) was,
\[ = -\gamma L \]
\[ = -(\nu L - KL) \]
\[ = -44^\circ 56' 44'' \]
For 1931 A.D., the celestial longitude of \( \alpha \text{ Arietis} \) as stated before, was \( = 36^\circ 41' 50'' \). Hence the total change till 1931 A.D. in the celestial longitude of \( \alpha \text{ Arietis} \) works out to have been
=36^\circ 41' 50'' + 44^\circ 56' 44'' = 81^\circ 38' 38''

which represents a lapse of 5,925 years, ignoring the proper motion of \( \alpha \) Arietis. The date becomes 3995 B.C. which may be set down as 4000 B.C.

This was very nearly the date when, it is alleged, Tvaṣṭr communicated to Dadhīchi the celestial signal of the heliacal rising of \( \alpha \) Arietis for the advent of spring at the latitude of Kurukṣetra.

(Anc : Ind : Cr : Sengupta : p. 65-67)

Annexure B

Let the above figure represent the observer's sphere at the latitude of Kurukṣetra; HPZH' is the meridian, H<KEH' the horizon, QE'Q the celestial equator, Z and P are respectively the zenith and the celestial pole.

Let S be the position of the sun at 18° below the horizon, so that ZS = 108°. The sun is at the summer solstice.

We take \( \omega \) the obliquity of the ecliptic = 24° 6' 35"

which was true for 4000 B.C. In the figure \( \gamma KS \) is the ecliptic, cutting the horizon at the point K. The point \( \alpha \) on the horizon is the position of \( \alpha \) Leonis when it is just on the horizon, although it would be raised above it by about 35' due to refraction; from a at \( \alpha L \) be drawn a perpendicular to
the ecliptic so that $\gamma L$ was the celestial longitude of $\alpha Leonis$ at the time we propose to determine.

The celestial longitude of $\alpha Leonis$ for 1931 A.D. $=148^\circ 52' 11''$; the celestial latitude of $\alpha Leonis$ for 1931 A.D. $=0^\circ 27' 26''$, which is supposed to remain constant.

1. In the triangle ZPS, the side ZP $=60^\circ$, PS $=65^\circ 53' 25''$ and ZS $=108^\circ$; the angle ZPS is given by,\[
\tan \frac{ZPS}{2} = \sqrt{\frac{\sin \frac{ZS+PS-ZP}{2} \times \sin \frac{ZS+ZP-PS}{2}}{\sin \frac{ZS+PS+ZP}{2} \times \sin \frac{PS+ZP-ZS}{2}}}.
\]

\[\therefore ZPS = 130^\circ 29' 16'';\]

\[\therefore EPS = 40^\circ 29' 16'';\]

\[\therefore \gamma E = 40^\circ 30' 44''.\]

2. In the triangle KE$\gamma$, the four consecutive parts are $\angle KE\gamma = 120^\circ$, E$\gamma = 49^\circ 30' 44''$, E$\gamma K = 24^\circ 6' 35''$ and $\gamma K$. Hence $\gamma K$ is given by, $\cot \gamma K \sin 49^\circ 30' 44''$

$= \cos 49^\circ 30' 44'' \times \cos 24^\circ 6' 35'' - \tan 30^\circ \times \sin 24^\circ 6' 35''$

we use the auxiliary angle given by

$\tan \phi = \frac{\tan 30^\circ}{\cos 49^\circ 30' 44''}$, \[\therefore \phi = 41^\circ 38' 38''.\]

\[\therefore \cot \gamma K = \frac{\cot 49^\circ 30' 44'' \times \cos 65^\circ 45' 13''}{\cos 41^\circ 38' 38''},\]

\[\therefore \gamma K = 64^\circ 50' 38''.\]

3. In the same triangle KE$\gamma$, the angle K is given by,\[
\sin K = \frac{\sin \gamma E \times \sin 120^\circ}{\sin \gamma E}.
\]

\[\therefore \angle K = 46^\circ 41' 29''\]

4. In the triangle K$\gamma$L, we have $K = 46^\circ 41' 29''$, the angle L is a right angle, and $\angle L = 27' 26''$.

\[\therefore KL = 25' 51''\]

We have found before that $\gamma K = 64^\circ 50' 38''$.

Now $KL = 25' 51''$

\[\therefore \gamma L = 65^\circ 16' 29''\]

Now the celestial longitude of $\alpha Leonis$ for 1931 A.D. $= 148^\circ 52' 11''$ and the celestial longitude of $\alpha Leonis$ for the required past date $= 65^\circ 16' 29''$. 

\[\therefore \text{required past date} = 65^\circ 16' 29''.\]
ANNEXURE C

the increase in celestial longitude of \( \alpha \) Leonis during the entire period = 83° 35' 42''.

The mean precession rate for the period = 49''.5938

Annual proper motion of \( \alpha \) Leonis = -0''.2478

the mean annual variation in longitude of \( \alpha \) Leonis = -49''.3460.

the lapse of years till 1931 A.D. = 6100 nearly.

te the date = 4170 B.C.

(If the sun's depression below the horizon were taken at 17°, the calculated date would come out to be nearly 4000 B.C.).

Anc : Ind : Cr : Sengupta, pp. 77-79

### Annexure C

*Mean tropical longitudes of stars on 1.1.1976 at 10 h, I.S.T.*

<table>
<thead>
<tr>
<th>Indian name of the star</th>
<th>Star name</th>
<th>Tropical longitude on 1.1.1976</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aśvinī</td>
<td>β Arietis</td>
<td>33° 38' 4''.8</td>
</tr>
<tr>
<td>2. Kṛttikā</td>
<td>ALCYONE or n Tauri</td>
<td>59° 39' 24''.8</td>
</tr>
<tr>
<td>3. Rohiṇī</td>
<td>Aldebaran or α Tauri</td>
<td>69° 27' 12''.8</td>
</tr>
<tr>
<td>4. Mṛgaśiras</td>
<td>λ Orionis</td>
<td>83° 22' 16''.8</td>
</tr>
<tr>
<td>5. Puṣyā</td>
<td>δ Cancri</td>
<td>128° 23' 10''.8</td>
</tr>
<tr>
<td>6. Āślesā</td>
<td>ς Hydrae</td>
<td>132° 0' 40''.8</td>
</tr>
<tr>
<td>7. Maghā</td>
<td>Regulus or α Leonis</td>
<td>149° 29' 42''.8</td>
</tr>
<tr>
<td>8. P. Phālgunī</td>
<td>δ Leonis</td>
<td>160° 58' 44''.8</td>
</tr>
<tr>
<td>9. U. Phālgunī</td>
<td>Denebola or β Leonis</td>
<td>171° 17' 2''.8</td>
</tr>
<tr>
<td>10. Hastā</td>
<td>δ Corvi</td>
<td>193° 7' 3''.8</td>
</tr>
<tr>
<td>11. Citrā</td>
<td>a Virginis</td>
<td>203° 30' 21''.8</td>
</tr>
<tr>
<td>12. Viśākhā</td>
<td>a Libra</td>
<td>224° 44' 51''.8</td>
</tr>
<tr>
<td>13. Anurādhā</td>
<td>δ Scorpii</td>
<td>242° 14' 8''.8</td>
</tr>
<tr>
<td>14. Jyeṣṭhā</td>
<td>Antares or a Scorpii</td>
<td>249° 25' 36''.8</td>
</tr>
<tr>
<td>15. Śravanā</td>
<td>Altair</td>
<td>301° 26' 13''.8</td>
</tr>
<tr>
<td>16. Revatī</td>
<td>t Piscium</td>
<td>19° 32' 28''.8</td>
</tr>
</tbody>
</table>

(As per Lahiri’s Ephemeris)
Annexure D

*The Statesman—22nd October 1975*

**Age of Mahābhārata War: Appeal to Historians**

Bijnor, Oct. 19—Mr. B. P. Sinha, former Chief Justice of India, today appealed to historians not to jump to conclusions in regard to fixing the time of the Mahabharata War, reports PTI.

Inaugurating a three-day seminar on "the age of the Mahabharata war", organized by Vidur Sewa Ashram, Mr. Justice Sinha said that even scholars were human beings and prone to commit errors.

Quoting Vincent Smith and Sir John Marshall's views on Indian history and the Indus Valley civilization, he said further researches had proved they were wrong. The Western scholars propounded the theory that Mohenjo Daro and Harappan civilizations were local but excavations carried out by other Western and Indian archaeologists proved these civilizations were as old as Babylonian and Egyptian civilizations.

Mr. Justice Sinha said historians brought up in Graeco-Roman culture believed that Graeco-Roman civilizations were older than the Indus Valley civilization. But later they themselves found India's to be older than the Graeco-Roman. He, therefore, appealed to Indian historians and Vedic scholars not to take hasty decisions but do more research on the subject and conduct excavations at places associated with the Mahabharata war.

Annexure E

*The Statesman—October 28, 1975*

**Mahābhārata War Not A Myth, Say Scholars**

NEW DELHI, Oct. 27—Though there are conflicting views about the date of the Mahabharata war between the Kauravas and the Pandavas, it is not a myth as was held by Dr. H. D. Sankalia. This is the considered view of historians, Vedic scholars and astronomers who took part in a three day
ANNEXURE E

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seminar organized by the Vidur Seva Ashram near Bijnore in Uttar Pradesh from October 19 to 21, reports PTI.

A couple of decades ago, there were four schools of thought about the date. One held that the war commenced around 5100 B.C.; the second put the date at 3100 B.C.; the third at 1400 B.C.; and the fourth at 900 B.C. Today the exponents of the first and the last schools of thought have disappeared. Vedic and Sanskrit scholars now believe the war was fought in 3000 B.C. while modern historians and astronomers put the date between 1414 B.C. and 1400 B.C. This viewpoint had been propounded earlier and defended stoutly by eminent men like Bal Gangadhar Tilak, R.C. Majumdar and Pandit Sitanath Tavabhushana.

During the three-day deliberations, the Vedic scholars mainly depended on the “Nakshatradigana” mentioned by characters like Bhishma, Krishna and Karna in the Mahabharata and also references to these facts in Upanishads and the Mahabhagavatam. They did not take into consideration the dates of the later dynasties or the evidence available in the form of rock inscriptions, clay tablets pertaining to the later kings for fixing the date of the war.

The modern historians and astronomers attending the seminar pointed out that if was necessary to take into account the dates relating to dynasties like the Sakyas, Mauryas, Nandas and Guptas to arrive at the truth. They said if the viewpoint of the Vedic scholars was to be accepted, Ashoka had to be pushed back to 1474 B.C., Chandragupta Maurya to 1536 B.C., and Buddha to 1800 B.C.

Swami B. H. Bon Maharaj, founder-president of the Institute of Oriental Philosophy, Vrindaban, in his presidential address, said that in fixing the date at 3136 Pausa-Amavasya B.C., he was depending mainly on the Mahabhagavatam, the commentary written on this “Itihasa” by Jiva Goswami and Surya Siddhanta.

He said that according to the Mousala Parva of the Mahabharata, the war was fought 36 years before the passing
away of Lord Krishna and that was the beginning of ‘Kali Yuga’. Therefore, the war was fought towards the end of ‘Dwapara Yuga’ and only 36 years before the beginning of Kali Yuga. “If we calculate on this basis the date will be 3136 B.C., Amavasya of February.”

Another supporter of this theory was Prof. K. Srinivasa Raghavan of the Aurobindo Study Circle, Madras. He said the Mahabharata was of astronomical data which were found to be consistent. In spite of this fact, he said, Western astronomers and historians refused to take such data into consideration.

Most of the Indian astronomers, even 30 years after independence, were still afraid of proclaiming the truth as they see it from the Mahabharata text, he said.

Prof. Raghavan said the ‘Rajasooya Yaga’ was performed by Yudhishtira on the Amavasya day with Prestha and Moola Nakshtras, i.e. on the exact completion of this day the sun was at 240.2 degrees of the zodiac.

Fifteen years later and just before the beginning of the war, Krishna and Karna decided the day for commencing the war (Udyoga Parva, chapter 143). That day was decided as Amavasya combined with Jeshta Nakshatra. Working forward from Rajasooya day, it is found that at this amavasya the sun was at 224.75 degree of the zodiac and this was the beginning of Jeshta.

Prof. Raghavan said three lunations later the Amavasya ended with the sun at 312.06 degrees of the zodiac and therefore on the Shukla Ashtami day of the month of Magha the sun was at 318.6 degrees of the zodiac and on this day Bhishma went to heaven. On this day the moon was at a distance of 90 degrees from the sun, i.e. the moon was in Rohini Nakshatra and this was given clearly by Bhishma himself in the Shanti Parva, chapter 46, Sloka 3.

This clearly indicated, Prof. Raghavan said, that Bhishma’s death occurred on Magha Shukla Ashtami in Rohini Nakshatra and with the sun at 318.86 degrees of the zodiac.
Therefore, on the Radha Saptami day, the day on which the sun turns north, the sun was 316.5 degrees of the zodiac. Thus it was the beginning of the Vasantha Rithu and the equinox was at 46.5 degrees of the zodiac.

He said at present, in 1975, the Vasant Ritu beginning or the equinox was at minus 23.4 degrees of the zodiac. Therefore, he said, the equinox had slipped back by 69.9 degrees of the zodiac.

Prof. Raghavan said the average rate of slipping of the equinox, termed as the precision of the equinox, was 72.5 years per degree. Hence, the interval between the year of the Mahabharata war and 1975 A.D. is 69.9 multiplied by 72.5 which comes to 5068 years or 3093 B.C.

He said that on the Jeshta day, mentioned by Krishna in Udyoga Parva, it was also stated that the Jupiter and the Saturn were at Rohini and the sun, moon and Rahu were at Jeshta, causing a solar eclipse. Calculating from this event one would obtain the date as October 13, 3067 B.C. On this day the Saradritu (or autumn equinox) begins with the sun at 224.75 degrees of the zodiac but the Amavasya comes earlier than the Saradritu. Therefore, Prof. Raghavan said, this Amavasya begins in the ‘antimasa’ (extra month). The next Amavasya begins in Margasira month (November 11, 3067 B.C.). Therefore on the Shukla Ekadasi only day of this Margasira month the Mahabharata war started, giving the day and date as Margasira Shukla Ekadasi, Friday, with Krittika Nakshatra or November 22, 3067 B.C. (Julian day 601528).

Annexure F

*The Statesman—29th October 1975*

‘Mahabharata War was Fought in 1400 B.C.’

New Delhi, Oct. 28—Data in rock inscriptions in India, and correlating evidence in histories of countries like Sri Lanka, Afghanistan and China all suggest that the
Mahabharata war occurred perhaps between 1414 B.C. and 1400 B.C., reports PTI.

This was the view advanced by some scholars at the seminar at Vidur Seva Asram, Bijnore last week.

According to the proponents of this view any attempt to accept 3138 B.C. as the date of the Mahabharata war would involve not only the rewriting of Indian history to push back dates of Asoka, Chandragupta Maurya and Buddha, but also Egyptian and Greek histories.

Mr. Kailash Chandra Varma, a scholar in history, astronomy and Vedic Literature, in his paper said if 3000 B.C. was to be accepted as the Mahabharata age, an examination of the dates between 3138 B.C. and 327-28 B.C. showed that in an interval of about 2800 years 32 Brihadrathas and 12 Sisunagas up to Mahananda would have reigned, working out an average of 67 years per king. Such an average, he said, has never been found in any country in the world ever since 3500 B.C. when the first king of the first dynasty of Egypt came to power.

Moreover, he said, this date of 3138 B.C. as the year in which the Mahabharata war was fought, was arrived at, in all probability, because of the belief that Kaliyuga started in 3102 B.C. and it could not have arrived earlier than Sri Krishna's Nirvana.

Mr. Varma said if this date was accepted then Indian historians would have to alter not only their own history but also the histories of other countries. Indian history would have to be rewritten pushing back age of Asoka to 1474 B.C., Chandragupta Maurya to 1536 B.C. and Buddha to 1800 B.C.

This alteration would clash with the well-established chronology of Egypt. This chronology was based on contemporary inscriptions since the time of at least the fifth dynasty there and this could not be dated later than about 2800 B.C. This calculation, he said, was based on the astronomical cycle of the coincidence of the first day of the civil calendar with the rise of Sothis i.e. Sirius which used to take
1460 years since the Egyptians consistently omitted to incorporate the "leap year" in their reckoning.

He said this presumption would affect Greek history and paleography. Herodotus in the fifth century B.C. acknowledged that the Greeks had obtained their alphabet from the Phoenicians whose date works out to about 750-700 B.C. and the Greeks acknowledged that they had been illiterate before this period. He said that in the Greek inscriptions of Asoka (Kandahar inscriptions) found in Afghanistan four Greek letters for 'eta', 'xi', 'psi' and 'omega' were found and they were incorporated in Greek alphabet in 402 B.C.

Mr. Varma said fixing date of the Mahabharata war in 3138 B.C. would mean pushing back the Greek adoption of the alphabet to 2900 B.C. and the incorporation of the four letters in the Asokan inscription would have to be dated 1602 B.C.

Again, he said, it would mean starting the Gupta era from about 328 B.C. This was contradicted by the evidence of Alberuni who on the information given by Indian scholars in the middle of the 11th century, was able to identify the Gupta era with the Vallabhi era and this enabled Dr. Fleet to establish that the Gupta era was equivalent to 319 A.D.

He said the date in the Vikrama era in the Mandasaur inscription of Bandhu Varma and Kumaragupta II referred to 473 A.D. Thus again the date of the Gupta era was confirmed as 319 A.D.

Mr. Varma said this date was also confirmed by Mr. P. C. Sen Gupta in his book the "Ancient Indian Chronology" after examining astronomical statements contained in 12 inscriptions, including the one of the Gupta year 165.

Mr. Varma said attempts to push back the date of the Mahabharata war would also interfere with the chronology of Sri Lanka which, on account of its contact with the well-established chronology of China since 841 B.C. maintained an accurate account of their kings. This Sri Lanka chronology was
based on the Buddhist era there. According to Dr. Paranavittana, the starting point of the Buddhist era in Ceylon was 544 B.C. This scholar fixed this date on the basis of an inscription dated 398 A.D. of King Upatissa I (A.D. 368-410). It was an established fact that an envoy was sent to China by King Mahanama, son of Upatissa I (A.D. 410-432) and his Ambassador was received in 428 A.D. by the Chinese emperor. Thus linking the Ceylonese chronology with the well-established chronology of China and the latter's dates from 841 B.C. were found to be very accurate.

Mr. Varma said the inscription stated that it was set up in the 28th year of the reign of Mahanama. It not only gave the month, “Nakshatra” etc but also added that it was the 941st year of the Buddha’s Nirvana.

He said Meghavarna of Ceylon belonging to the first half of the fourth century A.D. sent an ambassador to Samudragupta.

If any attempt was made to upset the date 544 B.C. as the starting point of the Buddhist era in Ceylon it would also distort the synchronization of the periods of Chandragupta Maurya, Stulabhadra, Bhadrabahu and Subhadra (Jain scholars of that period). Thus it was not possible to push back the dates of the Gupta era. Asoka Chandragupta Maurya and Buddha Nirvana beyond 319 A.D., 274 B.C., 325 B.C. and 544 B.C. respectively.

Mr. Varma said that from this data it was now possible to make a tolerably accurate date for the Mahabharata war. He said Buddha, Prasenajita of Kosala, Chanda Pradyota of Avanti and Udayana of Kausambi were contemporaries according to Buddhist scriptures and they were 24 generations after the Mahabharata war. Now it was a well-established fact that there could not be more than three generations to a century (accepted by historians since Herodotus).

Very recently Mr. Mr. G. S. Basu, in his “Purana-pravesa”, on biological and Yuga Ganana of the Puranas, came to the same conclusion, 33 years per generation, and
this had been confirmed by epigraphic evidence of known dated dynasties.

This would lead, Mr. Varma said, to the conclusion that the Mahabharata war took place in 1416 B.C. on the basis of Buddha's birth in 624 B.C. plus 24 generations multiplied by 33 years of average rule per king.

Mr. Varma said the other calculation was that 32 Brithadrathas ruled over Magadha after the Mahabharata war for 700 years. They were followed by the Sisunaga dynasty of 12 rulers lasting 362 years; then came Mahapadma Nanda and his dynasty was supplanted by Chandragupta Maurya in 325 B.C. This would work out to 1397 B.C. and thus by all calculations the Mahabharata war could not have been fought earlier than 1400 B.C. Mr. Varma asserted.

Puru-Kuru Line

Dr. Hari Anantha Phadke, research officer, "history of Krnukshetra"—a project sponsored by the Haryana Government—placed the war some time in the latter half of the ninth century B.C.

He said early Vedic literature referred to a number of rulers belonging to the Bharata—Puru-Kuru line who were known to be ancestors and predecessors of Parikshit of Mahabharata. These rulers were Pururavas, Aila, Ayu, Yayati, Nahushya, Samvarna, Pratipa, Aristasena, Santanu, Vichitravirya and Dhritarashtra. Of these, Vichitravirya and Dhritarashtra could be relevant in ascertaining the date of the Mahabharata war.

Dr. Phadke said Santanu mentioned in the last portion of the Rig Veda, was in all probability the great grandfather of the Kauravas and Pandavas. The abdication of Santanu's brother Devapi was well known to the Puranic tradition. It had been suggested by Pargiter that Devapi and Santanu were wrongly mentioned as sons of Pratipa, who was their
grandfather. Their father, Aristasena, had probably died earlier and so was omitted in the Puranic geneology.

It may thus be possible, Dr. Phadke said, that the battle was fought after the composition of the Rig Veda. This, according to some scholars, was the reason why the battle was not mentioned in Vedic texts.

He said there was also a reference to Vichitravirya and Dhritarashtra in the Kathaka Samhita of the Yajurveda. Thus this Dhritarashtra could be none other than the grandson of Santanu. If the last portion of the Rig Veda was composed some time before 1000 B.C. and from this point we start counting the reigns of Santanu, Vichitravirya, the regency of Bhishma and then the long rule of Dhritarashtra, it might be possible to arrive at the date of the war in the second half of the ninth century B.C. Incidentally, this came close to the date 950 B.C. of Pargiter on the basis of Puranic chronology and 980 or 930 B.C. of Mr. B. B. Lal on archaeological grounds.

**Explorations Near Kurukshetra**

From a Correspondent

Chandigarh, Oct. 28—Explorations in the vicinity of Kurukshetra have been in progress, under the direction of Dr. U. V. Singh, Head of the department of Archaeology, Kurukshetra University, for some time now with a view to ascertaining the archaeological potentialities of several mounds, according to a university spokesman.

The sites explored include Sakhaji ka Tila, Dudakheri, Panditon ka Tila, Bari, Jogna Khera and Narakatari. The mound of Sakhaji ka Tila seems to contain the remains of a temple complex of the Gurjra-Pratihara period. The mound of Dudakheri has yielded pottery of the late phase of harappan culture and also the well-known painted greyware ascribable to first quarter of the first millennium B.C.
ANNEXURE G

Annexure G

The Statesman—3rd November, 1975

Seminar on Mahabharata and Ramayana Proposed

Varanasi, Nov. 2.—Banaras Hindu University has proposed to the University Grants Commission that an all-India seminar be organized on the controversy over the Mahabharata and the Ramayana, reports PTI.

Dr. Gopal, who was the president of the Ancient India section of the Indian History Congress last year, said: "we are requesting the UGC to provide necessary funds for the seminar. The problem is a complicated one with diverse aspects which cannot be solved through Press statements. Newspapers are not the forum for settling such complicated issues".

Asked about his views on the subject, Dr. Gopal said: "The totality of the available evidence makes a reasonable case for the historicity of the Mahabharata war. Some characters of the epic and a few details of its narrative find general credence from the later Vedic literature, including the Brahmans and Upanishads, early grammatical works of Panini and Patnajali, the fragments of Indica written by Megasthenes and Jain traditions".

Much of the scepticism, he said, sprang from the apparent absence of archaeological evidence. But, as professor B. B. Lal had observed, excavations at Hastinapur and Kaushambi confirmed the Mahabharata account of the cities.

"No doubt the archaeological evidence has its own merit, its own objectivity. But, unless we are sure that we have dug at the right spot, we cannot over-emphasize the negative argument of absence of archaeological matter. Archaeology depends on the chance survival of evidence and for certain cultural details it cannot be expected to provide positive and concrete confirmation.

As for the date of the Mahabharata war, Dr. Gopal said that all possible indications must be carefully worked out. The conflict among the traditional dates was advanced to challenge
the historicity of the event but the conclusion did not necessarily follow from the argument. Similar conflicting traditions existed about other historical events, for example Buddha’s Parinirvana, but that could not demolish the historicity of these events, he added.

Annexure H

*The Statesman—12th December, 1975.*

**Kurukshetra War Dated At 3137 B.C.**

By a Staff Reporter

Mr. A. N. Chandra said in Calcutta on Thursday that recent archaeological findings has proved that the Kurukshetra war was a historical event. What remained to be done now was to fix the date. He was in favour of 3137 B.C.

Mr. Chandra’s paper on “The date of the Mahabharata War” has been accepted by the Indian History Congress which is scheduled to meet at Aligarh for three days from December 29. Speaking at a meeting organized by the Indo-German Association, he said that the period between 1200 B.C. and 1400 B.C. was generally favoured by Puranic scholars, but 3137 B.C. was the traditional date.

The astronomers, Aryabhatta and Bhaskara, and the “Aihole Inscription” favoured the traditional date. Kalhana, the historian of Kashmir, dated the war 653 years later. A verse of Vriddha Garga quoted by Varahamihir pointed to around 3137 B.C.

Mr. Chandra contended that a date close to 3137 B.C. could be computed from the astronomical references in the Mahabharata, particularly, Vyasa’s advice to Dhritarashtra on the Kartika full moon night, Krishna’s conversation with Karna, the full moon on the day of the war, the solar eclipse on the second day after Karna’s talk with Krishna and the death of Bhisma on the winter solstice after lying on the arrowbed for 58 nights from the 10th day of the war. A verse found in the
Sahakti Sangama Tantra and accounts of Megasthenes quoted by Pliny, Arrian and others practically favoured this period. Mr. Chandra concluded that if this date was accepted by historians, after further investigation, the date of the Aryan “invasion or migration” around 1500 B.C. would need “drastic revision”.

*The Hindustan Times—13th December, 1975*

*Mahabharata war waged in 3137 BC*

Calcutta, Dec. 12 (UNI)—Recent archaeological findings support the view that the Mahabharata war is a historical event.

Historian A. N. Chandra, in a paper read at a seminar on the ‘date of the Mahabharata war’, organised by the Indo-German Association here, maintained that the war took place in 3137 B.C. although the period between 1200 B.C. and 1400 B.C. was generally favoured by puranic scholars.

He quoted several astronomers—Aryabhata and Bhaskara—and the Aihole inscription in support of his arguments.

A verse in ‘Vriddha Garga’ quoted by Varahmaihira, also set the event around 3137.

Mr. Chandra, who proposes to present his paper at the Indian History Congress at Aligarh from Dec. 29, said a date close to 3137 B.C. could be computed from the astronomical references in the Mahabharata.

A verse in the ‘Shakti Sangama Tantra’ and the accounts of Megasthenes quoted by Pliny and others also supported this date.

However, if this date was accepted, the date of the Aryan invasion or immigration, which was now thought to be around 1500 B.C. “would need to be drastically revised”.

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THE DATE OF KURUKSHETRA WAR

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